Case No COMP/M.4000 INCO/FALCONBRIDGE

Only the English text is authentic.

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 8 (2)
Date: 04/07/2006

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 04.07.2006

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PUBLIC VERSION

COMMISSION DECISION

of 04/07/2006

declaring a concentration to be compatible with the common market and the EEA Agreement

(Case No COMP/M.4000 - INCO/ FALCONBRIDGE)

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(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings[1], and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 24 February 2006 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

After consulting the Advisory Committee on Concentrations[2],

Having regard to the final report of the Hearing Officer in this case [3],

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1 OJ L 24, 29.1.2004, p. 1.

2 OJ C ...,...200. , p....

3 OJ C ...,...200. , p....

WHEREAS:

(1) On 20 January 2006, the Commission received notification pursuant to Article 4 of Council Regulation (EC) No 139/2004 ("Merger Regulation") of a proposed concentration by which the undertaking Inco Limited ("Inco", Canada) acquires control, within the meaning of Article 3(1)(b) of the Merger Regulation, of the whole of the undertaking Falconbridge Limited ("Falconbridge", Canada) by way of a public bid announced on 11 October 2005. For the purpose of this Decision, the merged entity will be referred to as "New Inco".

(2) After examination of the notification, the Commission has concluded that the notified operation falls within the scope of the Merger Regulation and raises concerns as to its compatibility with the common market.

I. THE PARTIES

(3) Inco is an international mining company principally active in the mining, processing, refining and sale of various nickel products, copper, cobalt and precious metals as well as sulphur products. Inco's worldwide sales in 2004 were EUR 3,439 million. Inco's activities are mainly focused on nickel, which accounted for 83% of its total sales while copper accounted for 9%, cobalt for 1% and precious metals for 5%.

(4) Falconbridge is an international mining company principally active in the mining, processing, refining and sale of various nickel products, copper, cobalt, lead, zinc, aluminum and precious metals as well as sulphur products. Falconbridge generated in 2004 worldwide sales of EUR 5,610 million. [40-60%]* of its sales related to copper, [20-40%]* to nickel, [10-30%]* to aluminium, [0-10%]* to zinc and [0-10%]* to cobalt.

II. THE OPERATION AND THE CONCENTRATION

(5) On 11 October 2005, Inco announced its intention to acquire, by way of a public bid, all of the outstanding shares of Falconbridge. The Board of Directors of Falconbridge has recommended that Falconbridge shareholders accept the offer. If the offer is successful, Inco will obtain sole control over Falconbridge within the meaning of Article 3 of the Merger Regulation. The notified operation is therefore a concentration.

III. COMMUNITY DIMENSION

(6) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5,000 million[4]. Each of the undertakings concerned has a Community-wide

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* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

4 Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C 66, 2.3.1998, p. 25).

turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation has therefore a Community dimension.

IV. PROCEDURE

(7) The parties held pre-notification discussions with the Commission from October 2005 until notification on 20 January 2006.

(8) Following its market investigation in first phase, the Commission identified competition concerns in certain relevant markets and adopted a decision to open an in-depth investigation of the proposed concentration pursuant to Article 6(1)(c) of the Merger Regulation on 24 February 2006.

(9) A non-confidential summary of the responses of third parties to the requests for information in Phase I was provided to the parties on 3 March 2006.

(10) Together with their comments on the Article 6(1)(c) decision, the parties submitted a remedy package on 16 March 2006. After extensive discussions with the Commission, the parties subsequently submitted a revised remedy package on 5 April 2006. The revised remedy package was the subject of a market test with third parties.

(11) The Commission sent the parties a Statement of Objections on 8 May 2006. Inco replied to this Statement of Objections on 22 May 2006 and Falconbridge on 23 May 2006. A hearing was held at the parties' request on 29 May 2006.

(12) On 7 June 2006, the parties submitted a revised remedy package with a view to rendering the transaction compatible with the common market and the EEA agreement. These commitments were slightly amended thereafter. A final version was submitted on 26 June 2006.

(13) This transaction is also being reviewed by the U.S. Department of Justice. The parties have granted a waiver to the Commission and the U.S. Department of Justice so that both agencies can exchange documents and views.

V. RELEVANT MARKETS

Introduction

(14) The proposed transaction takes place in the mining, processing, refining and sale of non-ferrous metals. The parties' activities overlap significantly only as regards nickel and cobalt. The remainder of the Decision focuses only on the impact of the transaction on some markets within the nickel and cobalt industries.

Nickel

The nickel production chain

Nickel mining

(15) Nickel mines are essentially located in Australia, Canada, Russia, Cuba, New Caledonia, Indonesia, Brazil and China. Two main types of nickel ores are extracted: (i) sulphide ores and (ii) laterite ores. Sulphides ores typically occur in underground deposits, which are drilled and blasted to extract the ore. Laterite deposits may be exploited in near-surface deposits, using earth-moving equipment. Mined nickel ore contains 0.5-3.5% of nickel. It is further processed and refined to obtain various finished nickel products.

Processing of nickel ores

(16) Typically, nickel ores are first milled and concentrated to obtain nickel concentrate. The ore is first ground into a fine powder (milling), which may then be concentrated by magnetic separation and flotation, in which nickel-bearing material is separated by liquid surfactants. Sulphide ores are generally amenable to concentrating by milling and flotation. Only certain laterite ores are amenable to upgrading by grinding and screening to remove low grade material. Because of transport costs, nickel ores are usually not transported over long distances and the milling and concentration stages are generally achieved in facilities located close to nickel mines[5].

(17) Nickel concentrate is then processed through a smelting (pyrometallurgical) or a leaching (hydrometallurgical) technique. Both processing techniques can be applied to sulphide and laterite ores. Smelting consists in feeding the concentrate through high temperature furnaces to remove impurities. Leaching, often used for laterite ores, consists in extracting metallic content by feeding the concentrate into an autoclave with an acid and under conditions of high pressure and temperature. Many different leaching processes have been developed to process laterite ores. Smelting and leaching facilities are generally designed for specific feed (concentrate) although they may also handle mixed feed from a variety of sources. They are normally located close to mines.

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5 This is particularly true as regards laterite nickel ores. Laterite ores are usually not amenable to upgrading by milling and concentrating and the whole ore has to be processed in order to recover the contained nickel (and cobalt). For this reason, the laterite processing plants are commonly located close to the mine to reduce the costs of transporting large quantities of ores (Form CO, p. 32). Nickel sulphide ores are also not commonly transported over long distances from the mines to the first stages of processing (Form CO, p. 31).

However, in some cases, existing facilities may be used to process intermediate products after transportation (instead of investing in a new facility)[6].

(18) The output of the smelting and leaching stages is intermediate nickel products, such as nickel carbonate, nickel hydroxide, nickel matte, mixed nickel-cobalt sulphide and nickel oxide. These intermediate products have a varying content of nickel and other chemical elements. For example, nickel matte is comprised predominantly of nickel and iron with copper and cobalt, and is subjected to further processing to produce nickel metals and other metal by-products such as cobalt and copper. Nickel carbonate contains carbon and oxygen, nickel hydroxide contains oxygen and hydrogen, mixed nickel-cobalt sulphide contains sulphur, and nickel oxide contains oxygen. These other chemical elements are separated from the nickel in the refining process.

Refining

(19) Intermediate nickel products are further refined to obtain finished nickel products. Refining is the final processing stage. There are five principal technologies to refine nickel: (a) ladle refining for ferronickel, (b) converting for nickel matte, (c) electrolytic refining, (d) hydrogen reduction and precipitation, and (e) carbonyl refining. These refining technologies are applied to specific types of intermediate nickel products and produce different types of finished nickel products in terms of purity, size and shape.

(20) In the ladle refining process, ore or concentrate is blended, pre-dried and heated at a high temperature and undergoes a process of melting and reduction to yield crude ferronickel. The crude ferronickel can be further processed into ferronickel, a material containing essentially iron and nickel with an average nickel content of 20-40%, which is used in the production of stainless steel.

(21) Crude ferronickel can also be converted into nickel matte with a nickel content of 75% by further processing in an electric furnace or by sulphidisation, followed by passage through a secondary converter.

(22) Electrolytic refining of intermediate nickel products such as nickel matte is a common refining technique and comprises the electrorefining and the electrowinning processes. After purification stages, the feed is introduced as an anode in an electrolyte solution and subjected to an electric current. Nickel metal is plated on starter sheet cathodes to produce full plate cathodes. Cathodes, which are normally formed as sheets may be subsequently sheared into strips or squares of varying dimensions. For specific applications, electrolytic nickel may also be formed in particular shapes, such as rounds and crowns.

(23) In the hydrogen reduction process, an ammoniacal nickel solution is subjected to hydrogen gas, which results in the reduction of nickel and precipitation of nickel powder, which may be compacted into briquettes.

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[6] Since the sulphide ore is usually amenable to upgrading by flotation, it is common to perform the initial processing of the ore close to the mine site to produce an upgraded concentrate, which has a much lower volume and higher value per unit of mass than the ore, for shipping long distances to smelters and refineries if such facilities are not located in the vicinity of the mine (Form CO, p. 31).

(24) In the carbonyl process, intermediate nickel products, such a nickel oxide, are heated in a stream of carbon monoxide gas to produce volatile nickel carbonyl gas, decomposed at higher temperature to give nickel and carbon monoxide gas. Nickel is typically obtained in the shape of pellets (which may be flattened into discs or flats) or as powder, flakes and foams.

(25) Nickel refineries are typically designed to use one of the above-mentioned nickel refining technologies and can only accept as feed certain intermediate nickel products, or a mix thereof. The capital cost of building a refinery varies significantly based on the technology, the location of the mine and the feed and product specification and are estimated between [300-700]* million USD for a refinery with a capacity of 60,000 MT[7]. Refineries are not necessarily located close to mines, as intermediate nickel products have a higher nickel content and thus higher value per unit of mass, and transport costs thus represent a lower proportion of the total value of nickel intermediate products. Nickel intermediate products are transported extensively (e.g., matte from Botswana and Canada is transported to Falconbridge's Nikkelverk refinery in Norway)[8].

(26) Finished nickel products are essentially distinguished in terms of refining process, purity level, shape and size. As regards purity, three broad categories of finished nickel products can be identified: (i) ferronickel (nickel content 20%-40%), (ii) standard grade nickel (also called LME[9] grade nickel, nickel content 99.8% as described in the standard ASTM B 39-79) and (iii) high purity nickel (99.90% or higher nickel content). In addition to the nickel content, the levels of impurities (carbon, nitrogen, oxygen, bismuth, selenium, etc.) also play an important role as regards high purity nickel. Finished nickel products have various shapes and sizes: ferronickel comes in the shape of ingots, cones, shot, granules; electrolytic nickel comes in the shape of cathodes, cut cathodes (squares 4"x 4", 2" x 2", 1" x 1", strips), rounds and crowns; and carbonyl nickel comes in the shape of pellets, flats, discs, powders, foams and flakes. Customers' requirements in terms of purity and shape, and thus the suitability of various finished nickel products, depend on the end applications in which nickel is used.

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7 Form CO, p. 270.

8 Form CO, pp. 180-181.

9 London Metal Exchange, see below at recital (29).

Nickel suppliers

(27) Total primary nickel supply amounted to 1.26 million metric tons ("MT") in 2004[10]. All nickel volumes referred to in this decision correspond to the volume of contained nickel (and not to the volume of the finished nickel product concerned)[11] and unless otherwise specified correspond to 2004 data. Nickel is mined, processed and refined by large, vertically-integrated companies. While nickel exploration may be realised by smaller specialised companies ("junior companies"), the other stages of the nickel mining and processing chain are very capital intensive and require large scale investments. The major nickel suppliers worldwide in terms of total nickel sales are Norilsk (Russia; 243,000 MT), Inco (Canada; 222,000 MT), BHP Billiton (Australia; 143,000 MT), Falconbridge (Canada; 101,000 MT), Jinchuan (China; 71,000 MT), Sumitomo (Japan; 56,000 MT), Eramet (France; 55,000 MT), OM Group ("OMG") (USA; 49,000 MT) and Anglo American (United Kingdom; 47,000 MT). It is worth noting that, even without the merger, Inco would take over Norilsk's position as largest nickel producer as of 2009[12].

(28) All nickel suppliers are active at all levels of the nickel production chain although this may be at varying degrees. For example, Jinchuan, Sumitomo and OMG currently have fewer mining assets than the capacity of their refineries and have to purchase large quantities of intermediate nickel products on the merchant market. Conversely, Anglo American, BHP Billiton and Inco mine more nickel than they can refine.

(29) Nickel is a metal listed on the London Metal Exchange ("LME"), where standard nickel contracts are traded. The specification for nickel traded on the LME requires a 99.8% nickel content and specified levels of impurities. Nickel LME contracts may be settled with physical delivery at one of the LME warehouses or settled financially. The nickel price settled on the LME reflects the balance between demand and supply as well as market players' expectations of the evolution of the industry. The LME daily price is widely used as a reference price in supply contracts for finished nickel products between nickel suppliers and their customers. The LME may be used by market players as a hedging tool on the evolution of nickel prices or, exceptionally, as an additional outlet for sales or purchases of nickel (only for LME grade nickel). Only 48,000 MT of nickel were delivered physically through the LME in 2004, which corresponds to 3% of global nickel consumption and 0.2% of total LME contracts turnover in 2004. Operators active on the LME include hedge funds and commodity trading advisors, taking position on metal prices, investment dealers and brokers, producers, nickel customers, merchants and speculators.

(30) Nickel price on the LME increased from the level of 4,000-6,000 USD/MT in 1998 to 8,000 USD/MT in 2003, 13,000-14,000 USD/MT at the end of 2005 and 19,500-20,000 USD/MT in the last week of April 2006.

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10 Form CO, p. 149.

11 For example, if a supplier of ferronickel supplied 100 tons of ferronickel with 30% nickel content in 2004, the nickel contained in this volume and supplied by this supplier amounts to 30 tons.

12 Form CO, Table 80, p. 218, Table 82, p. 222, and p. 224.

(31) Most nickel products are priced according to LME levels to which a margin may be added or from which a margin may be subtracted, depending on the nickel products' technical characteristics and end applications.

Nickel end applications

(32) Finished nickel products are used in various end applications, which may be segmented into the following categories: (i) stainless steel, (ii) melting applications (other than stainless steel), (iii) plating and electroforming and (iv) specialty applications[13].

(33) Stainless steel is the main application of nickel and accounts for approximately 60-65% of total nickel consumption at the global level. Stainless steel is the least demanding end application of nickel in terms of technical requirements. Nickel used in the production of stainless steel is generally considered as a commodity product. Stainless steel producers generally privilege secondary nickel (see recital (57)), which accounts for half of their nickel consumption, ferronickel and then other (more expensive) finished nickel products.

(34) Besides stainless steel, nickel is used in a wide range of melting applications including non-ferrous alloys, foundry applications and alloy steels[14]. These applications represent together around 20-25% of total nickel consumption. Nickel alloys are frequently classified as ferrous or non-ferrous alloys (such as nickel- and copper-based alloys). Non-ferrous alloys include high nickel alloys, which in turn include super alloys which in turn include super alloys used in safety critical parts[15]. Super alloys, or high-performance alloys, are alloys with superior mechanical strength, good surface stability, corrosion resistance and ability to withstand high temperature without oxidising or losing mechanical properties. These end applications comprise a broad range of alloys, with varying nickel content and used in diverse final products. Nickel used for the different melting applications may differ in terms of shape (cathodes, squares, rounds, crowns, pellets or briquettes) and quality, although a minimum nickel purity of 99.8% (or more) is generally required. Certain nickel shapes are more desirable from a handling standpoint (such as shapes that can be more easily placed on conveyor belts to feed melting furnaces, or having regard to the size of the furnace);. Electrolytic cut cathodes, squares, rounds and crowns, as well as carbonyl pellets are most commonly used in the production of non-ferrous alloys[16]. Primary nickel is the main source of nickel for all melting applications. Although nickel scrap may be used in some melting applications, it cannot be used for the most demanding applications.

(35) Approximately 10% of nickel production is used in the plating and electroforming industry. An electroplating process is used to coat objects with nickel to achieve decorating and functional finishes. Electroforming consists in covering various types of

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13 Form CO, p. 77.

14 Alloys steels have a nickel content of approximately 10-20 per cent.

15 Form CO, p. 80.

16 Form CO, p. 86, Table 19.

moulds with shapes or thin metal deposits. For these applications, the shape plays an important role as certain finished nickel products, such as rounds and crowns, have a shape well adapted to the plating equipment of certain customers and dissolve more evenly during the plating process[17]. Secondary nickel is not used in the plating and electroforming industry. Finished nickel products are often sold to end customers active in the plating and electroforming industry via distributors.

(36) Finally, intermediate and finished nickel products may be processed to obtain a variety of specialty nickel products such as nickel powders, foams and oxides, which are used in a wide range of products such as batteries, fuel cells, powder metallurgy, automotive parts, special catalysts and salts, metal injection mouldings, hardmetal and diamond binders. These specialty nickel products account for 5% of total nickel consumption. These nickel specialty applications generally do not use secondary nickel.

Secondary nickel

(37) The output of the various processing and refining stages of nickel ore is commonly called "primary nickel". However, nickel may also be obtained from scrap or recycled sources (so-called scrap or "secondary nickel"). There are three main categories of scrap: (i) old scrap, resulting from the demolition of old equipment or building, (ii) revert, produced in the initial downstream production process for example in the melting of stainless steel or nickel alloys; and (iii) prompt, resulting from the production process of the finished products made from stainless steel and other alloys containing nickel (e.g., cutlery).

(38) Depending on its source, secondary nickel has a varying level of purity. While secondary nickel is extensively used in certain end applications, such as the production of stainless steel, only certain categories of secondary nickel (revert) may be used in other end applications which require a higher nickel purity.

Cobalt

(39) Cobalt is primarily obtained as a by-product of the refining of other metals (55% of cobalt production worldwide[18]), mainly copper and nickel. Cobalt is contained predominantly in nickel laterite ores but also in nickel and copper sulphide deposits and in sedimetary copper deposits. It is usually separated from nickel or copper bearing streams by solvent extraction or ion exchange and may be subsequently refined by electrolysis or hydrogen reduction. Cobalt is also extracted by itself from arsenide ores (40% of cobalt production worldwide) and refined following similar processes as for nickel refining. The main ore bodies are located in the Democratic Republic of Congo ("DRC"), Zambia, Russia, Western Australia, the Sudbury basin (Canada), New Caledonia and Newfoundland (Canada)[19]. The rest of worldwide cobalt production (5%) from cobalt-containing scrap (secondary cobalt). The sources of cobalt are

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17 See Inco's response to question 29, of request for information of 24 March 2006.

18 Form CO, p. 123.

19 [...]*.

primary cobalt, recycled cobalt, and the stock releases from the U.S. Defence Logistic Agency (DLA)[20].

(40) Depending on the processing and refining technique, cobalt may be sold as metallic cobalt (metal or powder) or as cobalt chemicals (chemical solution). Metallic cobalt finished products vary in terms of refining technology, purity level (99.3% and 99.8% or higher cobalt content and varying levels of impurities), shape and size. Cobalt chemicals include cobalt oxide, hydroxide, carbonate or sulphate forms to be sold into a range of end applications.

(41) Total cobalt primary supply represented 48,000 MT in 2004[21]. Large cobalt suppliers include large mining groups which produce cobalt as a by-product of their other metal refining activities and more specialized producers. The major cobalt suppliers worldwide in terms of total cobalt sales are OMG (USA, 7,900 MT), Falconbridge (Canada, 4,700 MT), Norilsk (Russia, 4,500 MT), Chambishi (Zambia, 3,800 MT), Sherritt (Canada, 3,300 MT), and Inco (Canada, 1,600 MT).

(42) Total cobalt supply in 2005[22] was as follows:

Supplier	**Supply 2005 All cobalt (in MT)**
China (Jinchuan and others)	12,700
OMG	8,170
Tocantins	1,136
Falconbridge	5,021
Norilsk	4,748
Chambishi	3,648
Sherritt/ICCI	3,391
Umicore	3,298
Murrin Murrin (Glencore)	1,750
CTT	1,613
BHP Billiton/QNI	1,400
Mopani (Glencore)	1,774

[20] [...]*.

[21] Form CO, p. 177.

[22] The Cobalt Development Institute, Cobalt News, April 2006, 2005 Production Statistics.

Inco	1,563
India	1,220
Gecamines	600
Kasese	638
Sumitomo	471
Eramet	280
Total	**53,421**
Stockpile sales (DLA)	**1,199**
TOTAL	**54,620**

(43) Cobalt is not a metal listed on the LME. Cobalt reference prices are however provided by the BHP Billiton trading platform and by specialized publications, such as the London Metal Bulletin ("LMB") which publishes prices for 99.3% purity or 99.8% purity cobalt with each high/low spread or Platt's Metals Week. The LMB prices are compiled and published as a result of phone inquiries to the main cobalt consumers and traders about their last and most representative commercial transactions. This price setting mechanism is not fully transparent. Cobalt prices can be volatile.

(44) Cobalt is used in different applications than nickel and demand is thus driven by other factors. Cobalt can be used for metallurgical or chemical end applications. Metallurgical applications of cobalt include super alloys used to cast parts for aircraft engines and power generation gas turbines, wear-resistant alloys and coatings, medical implants and magnetic and electronic alloys. Chemical applications of cobalt include lithium batteries, catalysts, pigments, hard metals, tires, adhesives, soaps and driers, and feedstuffs for electrolysis[23]. Super alloys are the major end-use application of cobalt, accounting for around one quarter of total demand[24].

(45) Cobalt demand growth is driven by the super alloy market and strong battery consumption (especially for Hybrid Electric Vehicles ("HEV"), although there is a substitution risk of cobalt with nickel and manganese for batteries which could limit growth).

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23 Form CO, p. 252.

24 "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 163. This is consistent with the estimate at the Cobalt Development Institute (CDI) conference on 18-19 May 2005 that cobalt demand for super alloys represented approximately 23% of total cobalt demand in 2005.

Relevant product markets

(46) The transaction affects the nickel and cobalt sectors. Both sectors can be delineated in various product markets.

Nickel product markets

Product market delineation proposed by the parties

(47) The parties submit that all finished nickel products fall into a single relevant product market[25]. That allegation is based on the grounds that there would be a strong demand-side and supply-side substitutability between the various finished nickel products. The parties state that this definition is consistent with the approach taken by the Commission in previous decisions. The Gencor/Shell (1994) decision would have identified a distinct product market for refined nickel[26]. In that decision and later decisions, the Commission left open whether the relevant product market should be further segmented according to levels of purity of refined nickel and whether product markets for the intermediate nickel products[27] should be defined.

(48) The parties finally consider that secondary nickel (i.e., nickel derived from scrap metal) products belong to the same relevant product market as primary nickel (i.e., nickel derived from ore)[28]. Secondary nickel would be commonly substituted for primary nickel, in particular for the production of stainless steel, as well as for alloy steels, foundry products, and non-ferrous alloys. However, the parties indicate that secondary nickel is not used in plating and electroforming, or for certain super alloys used in aerospace applications[29].

Assessment of the Commission

(49) Contrary to the parties' approach and for the reasons detailed below, the Commission's in-depth investigation has shown that it is appropriate to define the relevant finished nickel product markets according to end applications.

Intermediate nickel products

(50) There are two levels of intermediate nickel products: (i) nickel concentrate, produced at the milling and concentrating stages, and (ii) various nickel intermediates produced at the smelting, leaching or roasting stages. Nickel concentrates are processed in smelting

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25 Form CO, pp. 2 and 87.

26 Case No IV/M.470 Gencor/ Shell of 29 August 1994.

27 Case No COMP/M.3767 BHP/WMC of 26 April 2005.

28 Form CO, pp. 2 and 87.

29 Form CO, p. 88 and footnote 76: "*because of the stringent specifications for certain super alloys used in aerospace applications, much of the super alloy scrap is not suitable for direct recycling back into super alloys for aerospace applications. This material is sold, instead, to specialty alloy casting companies, stainless steel producers, or steel foundries*."

or leaching facilities to obtain a broad range of other intermediate nickel products, including nickel matte, crude ferronickel, mixed nickel sulphide, nickel hydroxides, nickel carbonate and nickel oxide.

(51) Most intermediate nickel products are not traded but consumed internally as the nickel industry is vertically-integrated to a large extent (See section VII). There are some long term transactions between mining operators not active in processing or refining and processing or refining operators with spare refining capacity. According to the parties[30], the total volumes of intermediate nickel products traded between third parties amounted to [100-160,000]* MT in 2004 and [100-160,000]* MT in 2005[31], or respectively [10-15]* % and [10-15]* % of global primary nickel production.

(52) All intermediate nickel products are further processed and/or refined to obtain finished nickel products used in a broad range of end applications. Intermediate nickel products are thus not substitutable to finished nickel products and constitute separate relevant product markets.

(53) Each type of nickel intermediate product has a varying content in nickel and in other elements, resulting from the differences in the nickel ores from which they are produced and the processing technology. As a result, not any type of intermediate nickel product can be further refined in any refinery without capital investment to adapt the refining process. In view of the limited supply and demand side substitutability of the different types of intermediate nickel products, there are probably distinct product markets for intermediate nickel products.

(54) A precise delineation is however not necessary for the purposes of this Decision as each of Inco and Falconbridge has very limited sales of intermediate nickel products[32].

Delineation of product markets by end application

(55) Contrary to the parties' approach, the Commission's market investigation has shown that it is appropriate to define relevant finished nickel product markets according to end applications.

(56) Firstly, demand patterns differ significantly between end applications, in particular in terms of structure of the demand, purity, size and shape of the products, and delivery requirements.

(57) Producers of stainless steel are steel producers, which purchase large quantities of nickel products directly from nickel suppliers. Demand is very concentrated, as a few large stainless steel producers account for the vast majority of demand[33]. Total primary

30 Form CO, p. 122.

31 These figures include some double counting as nickel intermediate products may be sold at two levels: concentrates are sold from the mine to the processing plant and other products are sold from the processing plant to the refinery.

32 Form CO, p. 117.

33 Form CO, p. 254.

nickel consumption for stainless steel amounted to 746,000 MT in 2004[34]. Stainless steel producers generally purchase nickel-containing scrap, ferronickel (which cannot be used in other end applications than stainless steel) and limited quantities of LME grade nickel.

(58) In contrast, the plating and electroforming industry is very fragmented[35] and a large number of small plating companies purchase small quantities of nickel in bags or in drums from distributors[36]. These customers require finished nickel products with a high nickel content (generally more than 99.8%) and only certain shapes and sizes of finished nickel products are adapted to their production equipment[37].

(59) Similarly, each nickel specialty end application has very different technical requirements[38] and can only use very few finished nickel products in its production process. For example, metal injection mouldings require very fine and spherical nickel powders, nickel powders are used in nickel cadmium batteries and nickel foams in nickel metal hydride rechargeable batteries, and nickel flakes are used in coatings for shielding electronic components[39].

(60) Secondly, nickel producers are also to a large extent specialized in supplying certain end applications.

(61) As explained below, certain end applications require a very pure nickel and/or specific product shapes. Only the parties and Eramet (as well as Sumitomo and to a much lesser extent Norilsk) can supply nickel products suitable for these applications.

(62) Inco and Falconbridge themselves have differentiated product lines, marketing policies and record their sales based on the different end applications.[…]*[40]. Falconbridge also markets different electrolytic nickel products for different end applications, on the one hand 1"x1" squares, crowns, micro-crowns, and D-crowns for plating, and on the other hand SUPERELECTRO[41] for super alloy production.

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34 Form CO, Table 47, p. 159.

35 The parties indicate in their Form CO, p. 259, that at a global level, the number of customers for nickel used in plating and electroforming is […]*.

36 Form CO, p. 265.

37 See Inco's response to question 29 of request for information of 24 March 2006.

38 Form CO, pp. 98 to 100.

39 Form CO, pp. 98 and 100.

40 […]*.

41 Falconbridge's product description on its website (http://www.falconbridge.com/ our_business/nickel/ products/nickel_ferronickel.htm) states that *"SUPERELECTRO - 99.99% electrolytic nickel cathodes, the purest commercially available form of nickel, used mainly in the aerospace industry for critical parts such as turbine blades and discs in jet engines"*, *"SUPERELECTRO is a further improvement of standard high purity Falconbridge electrolytic nickel. Specific trace elements have been further reduced to meet the most*

(63) The parties are among the few nickel producers active in the supply of nickel products for plating and electroforming or for use in super alloys and achieve only around […]*their sales in the stainless steel industry[42]. Conversely, most of the largest nickel suppliers, such as Norilsk, BHP Billition or Anglo American focus essentially on sales of commodity products to the stainless steel industry and achieve more than 80% of their sales in the stainless steel industry[43]:

Norilsk[44] (largest global nickel producer): *The range of products manufactured by MMC Norilsk Nickel is to a large extent dictated by the technology operating at its refineries. MMC Norilsk Nickel's refineries are very old plants with limited opportunity for upgrading to manufacture different and more technically-demanding products (...) For these reasons, MMC Norilsk Nickel does not produce high purity nickel specifically for use in the manufacture of super alloys and special alloys, although there have been occasional sales of nickel from its carbonyl plant to these sectors. (...) Norilsk Nickel makes occasional sales of nickel for plating but the quantities involved are small and MMC Norilsk Nickel does not target this sector".*

BHP Billiton[45] (third largest global nickel supplier): *"The activities of BHP Billiton are centered around the production of nickel briquettes, compacts (powder pressed into solid form) and ferro-nickel (containing 60% iron) for supply to the stainless steel industry. About 90% of BHP Billiton's output of finished nickel products described above is sold to stainless steel producers around the world. The remainder is supplied to foundry, battery and basic alloy industries. (...)BHP Billiton does not supply high purity nickel to the super alloy industry nor does its supply solid nickel forms (i.e., cathodes) to the nickel electroplating industry."*

Anglo American[46]: *"Anglo American (excluding Anglo Platinum) nickel operations produce ferronickel only for supply to the stainless steel industry*".

Anglo Platinum[47]: *"We are a platinum producer. We produce nickel as a by-product of our platinum mining. We do not manufacture certain nickel finished products due to our focus on platinum mining and the fact that nickel production is not our core business. We simply sell our nickel as full plate cathode and supply stainless steel producers, the largest market sector."*

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exacting requirement of superalloy manufacturers. Its consistently low carbon content has made SUPERELECTRO the preferred material for a number of applications such as single crystal superalloys".

42 Form CO, p 171.

43 Form CO, pp. 170 and 172.

44 Norilsk's response to the Commission's request for information of 27 January 2006.

45 BHP Billiton's response to the Commission's request for information of 27 January 2006.

46 Anglo American's and Anglo Platinum's responses to the Commission's request for information of 27 January 2006.

47 Anglo Platinum's responses to the Commission's request for information of 27 January 2006. Anglo Platinum is 75% owned by Anglo American.

(64) As regards specialty nickel products, there are very few nickel suppliers active in the supply of nickel powders, flakes and foams. According to the parties[48], for most of the specialty end applications only Inco, […]* compete and Inco […]* supplier of nickel foam for fuel cells and nickel flake.

(65) Thirdly, finished nickel product prices appear to differ according to the application. Nickel product prices are usually set by reference to the LME quoted price plus a premium (or less a discount). For example, Inco's average premium over LME prices amounted to a […]* USD/MT in the stainless steel industry while the average premium is […]* USD/MT in the plating and electroforming industry in 2005[49]. Further, these premiums over the LME are not correlated between different end applications: while Inco's average premium in stainless steel oscillated around a discount value of […]* USD/MT between 2001 and 2005 […]*.

(66) The pricing of specialty nickel products differs substantially from other finished nickel products and Inco, the main supplier of specialty nickel products, has historically set prices according to standard prices, which did vary with the LME[50].

(67) While there are probably distinct product markets per end application of nickel, a precise delineation is not necessary for the purposes of this Decision for most end applications. Only two relevant product markets (supply of nickel for the plating and electroforming industry and the supply of high purity nickel used in super alloys), where specific competitive concerns have been identified, are further discussed below.

Supply of nickel to the plating and electroforming industry

(68) The plating process is used to coat an object in the desired metal by passing electric current through a suitable solution (the electrolyte). Electroforming allows covering various types of moulds with shapes or thin metal deposits. Nickel is used to provide both decorative and functional finishes since it is a hard wearing and corrosion-resistant metal. In these applications secondary nickel cannot be used at all[51].

(69) The parties contend that there would be no specific relevant product market for nickel products sold to the plating and electroforming industry since there would be a significant degree of substitutability between the various finished nickel products. This would be true both on the demand and on the supply sides[52].

Demand-side substitutability

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48 Form CO, p 84 and Inco's response to the Commission's request for information of 24 March 2006.

49 Inco's response to the request for informationof 24 March 2006- Q28.

50 Inco's response to the Commission's request for information of 2 March 2006.

51 Form CO, Table 18, p. 85.

52 Form CO, section 6.3., p.91-92 and Inco's response to the Statement of Objections.

(70) On the demand side, the parties explain that some customers of nickel for plating and electroforming purchase a mixture of finished nickel products of different shapes and that the nickel chemistry is not a significant issue for use in plating and electroforming[53].

(71) The Commission's market investigation has shown that only specific finished nickel products can be used for plating and electroforming. Three product characteristics are mentioned by customers as the most important in their choice of nickel products for plating and electroforming: purity, shape and size. Other features of the plating and electroforming industry also point to absence of demand substitutability: specific packaging requirements and the presence of distributors.

(72) **Purity.** Data provided by customers show that while the plating and electroforming processes would theoretically only require nickel of a purity of at least 99.8%, in practice the nickel which is actually used has a nickel content of more than 99.8%. In fact, none of the customers of nickel for plating and electroforming who replied to the Commission's investigation stated that it had purchased nickel of purity equal to 99.8% or less. On the contrary, when asked to specify the products they had purchased, all the customers cited nickel products with a nickel content of more than 99.8%. They explained that this was due to technical reasons such as the fact that lower purity nickel would alter the quality of the finished plated product and also lead to increased production costs as they would need to stop the production line more frequently for electrolyte and anode cleaning.

(73) Furthermore, the Commission has carefully considered the products that are currently sold by nickel suppliers to the plating and electroforming customers and reached the conclusion that all the products that are sold to these end applications are in fact of a greater purity than 99.8%. Inco and Falconbridge have provided the Commission with their sales by nickel product and by end application. These data show that the nickel products sold to plating have a nickel content of more than 99.9%. Both OMG and Eramet, two of the main other suppliers to the plating and electroforming industry also supply nickel products that have a nickel content of 99.9% for OMG[54] or 99.97%[55] for Eramet.

(74) [...]*[56].

(75) In its response to the Statement of Objections, Inco submits that in case of a price increase by the parties, customers would source nickel of lower purity from alternative suppliers or directly from the LME. However history shows that while Inco's average

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53 Form CO, section 6.3., p.91-92 and response to the Article 6(1)(c) decision, §43, p.9.

54 See OMG's electrolytic nickel plating grade product specification on OMG website at the following address : http://www.omgi.com/buprod/nickel_metals_products/products/nickel_cathodes/omsel10714elctrolyticnickl.pdf

55 See Eramet's response to request for information received on 26 April 06, response to question 27.

56 [...]*.

premiums achieved for sales of nickel products for plating and electroforming have[…]*[57], there has been no new entry on the market of the supply of nickel to the plating and electroforming industry during that period.

(76) **Shape.** Although various shapes of nickel products are sold to customers active in plating and electroforming, these customers have specific requirements and/or preferences in terms of shape. Nickel purchased for plating and electroforming is generally sourced as cut cathodes, crowns and pellets. However these three shapes are usually not purchased by the same end customers as the latter have different production equipments (baskets, transport system and filtration systems) that are only suitable with some nickel products. Some customers explained that they have experienced different shapes and could not use all of them. This is the case for instance of customers using round products such as crowns. They explain that other shapes such as cut cathodes are not suitable to their process as they are prone to bridging problems and their corners would impede flow in their equipments[58]. This technical issue was mentioned during the Commission's market investigation by many plating and electroforming distributors and end customers. For example, an electro-plating customer located in England which is purchasing crowns explains that "*we have tried using different shaped products in our titanium baskets but these are prone to bridging problems*.[59]"

(77) Some customers also mentioned that they used baskets or automatic filling machines which can only be filled with crowns or pellets and could not purchase any sharp-edged materials such as cut cathodes which could damage the feeding mechanism. For instance, Eramet, one of the European suppliers to the plating and electroforming industry states "*Dealing with shape…With the most edged squares, hand shaking of the anodic baskets is mandatory and labour consuming*"[60].

(78) There is also compelling evidence of this "shape advantage" in the parties' marketing documents with regard to their nickel products for plating. Both Inco and Falconbridge put forward the gain that the customers will get from using nickel products of specific shape. For instance, Inco explains in the product data sheet for its "Inco R-Rounds Electrolytic Nickel"[61] that "*The advantages associated with its shape…improved settling in baskets, safe handling, improved flowability compared to squares of various sizes…have made this the preferred non-activated product for nickel plating worldwide*". Inco also submits with regards to its "Inco S-Nickel Pellets" that "*The unique spherical shape of INCO S-Nickel Pellets ensures a degree of flowability*

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57 Inco response to request for information of 24 March 2006, question 28.

58 Responses received to Commission's questionnaires sent to plating and electroforming distributors and end customers.

59 Response to a Commission's request for information received from Merridale Polishing & Plating Co. Ltd on 03 April 2006.

60 Response to question 28 of request for information received on 26 April 2006.

61 Information received in an e-mail from the parties […]* of 27 April 2006 in response to a request for information sent by e-mail. Document also available on its website at the following address: http://www.inco.com/customercentre/nickelplating/rrounds/default.aspx

unmatched by any other form of plating nickel, and this property makes it relatively easy to fill anode baskets of various sizes and shapes manually or with the aid of hoppers, funnels, channels and tubes. Fully automatic loading devices have been successfully employed with this anode material. The relatively high packing density coupled with its exceptional flowability and activity makes this product attractive for all types of plating, especially for high-speed engineering and electroforming applications."

(79) In the same manner, Falconbridge describes the benefit of using its crowns for plating and submits in the relevant product data sheet[62] that "*The nickel CROWN shape provides smooth-flowing, easy handling properties and promotes good settling in anode baskets, so important in preventing void formation and basket damage*."

(80) **Size.** With respect to the size, responses to the market investigation show that approximately 80% of the nickel products purchased by the customers of nickel for plating and electroforming is cut and/or of a small size (1"x 1", 2"x2" and 4"x4" cathodes, crowns, pellets, discs and flats)[63]. In particular 1"x1" cut cathodes are typically sold to the plating and electroforming industry[64] and account for approximately a third of total nickel sales in those end applications[65]. There again, plating and electroforming customers are limited in their choice of nickel products by their plating equipment. Namely plating baskets are designed to receive feed of a certain size.

(81) In their response to the Article 6(1)(c) decision[66], the parties submit that there is a very large quantity of full plate cathode available, both directly and via the LME, that can be sheared into a size suitable for plating either by the nickel producers themselves, by the distributors of nickel products for plating or even by third parties.

(82) This contention from the parties is not sustained by the evidence collected by the Commission in its investigation.

(83) First, the parties do not specify which type of nickel would be available in large quantity, and in particular do not state the purity of the nickel mentioned. As discussed above, plating and electroforming customers do not generally use nickel of 99.8% purity; they use higher grades. As will be explained below, this first purity requirement

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62 Information received in an e-mail from the parties […]* of 28 April 2006 in response to a request for information sent by e-mail. Document also available on its website at the following address: http://www.falconbridge.com/ documents/product_ information/Fal_Plating_Crowns.pdf

63 Data from the customers' responses to question 7 of the request for information sent on 26 January 2006, where the customers were asked to submit the list and quantity of each of the nickel products purchased.

64 1"x1" squares are not commonly used by super alloys customers for instance (see recital (128)).

65 Data from the customers' responses to question 7 of the request for information sent on 26 January 2006, where the customers were asked to submit the list and quantity of each of the nickel products purchased.

66 Parties' response to the Article 6(1)(c) decision, 15 March 2006, p. 3, §13.

restricts considerably the amount of nickel available for plating and electroforming applications.

(84) Secondly, the Commission's investigation shows that the shearing of uncut cathodes is not the current practice in the industry. In fact only 16% of the nickel sold to plating and electroforming customers was in the form of full plate cathodes[67].[…]*[68].

(85) Thirdly, there does not seem to be much shearing capacity available to customers. The Commission has asked the parties to provide a list of distributors that own shearing equipments[69]. Neither of the parties has been able to submit clear evidence on that issue. Inco submitted the names of only three distributors that have such machinery.[70] [...]*.

(86) This was broadly confirmed by the responses received from distributors during the Commission's investigation. Most of the distributors submitted that they only buy cut cathodes and only two of them said that they either cut or sub-contract some shearing operation to a third party.

(87) Some distributors also submitted that they had faced problems to shear some full plate cathodes because of thickness and quality problems. This issue seems to be confirmed in Inco internal documents where Inco states that […]*[71]. In its response to the Statement of Objections, Inco submits that this problem was merely reflecting a misuse of a plant's equipment and was solved by the machine's replacement.

(88) The shearing available capacity is also an issue for the parties themselves. In an internal e-mail, Inco's management discussed the possibility of extending its shearing capacity in its Thompson refinery. […]*.

(89) In 2003, Inco decided to invest in a new shearing and packing plant in Dalian (China). In response to a Commission request for information, Inco explains that this investment's decision was adopted by Inco as […]*[72] […]*.

(90) These plans cast doubts on the parties' views that there is ample availability for full plate cathodes to be sheared either by nickel suppliers or by third parties. In fact the investment made by Inco rather shows that there is limited demand side substitutability between full plate cathode and cut cathodes and that nickel producers prefer to build a plant dedicated to shearing rather than face the risk of losing customers. Furthermore

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67 Percentage calculated from the customers' responses to question 7 of the request for information sent on 26 January 06, where the customers were asked to submit the list and quantity of each of the nickel products purchased.

68 Inco's response to question 3.b. of the request for information of 24 March 2006, spreadsheet "question 3b.xls".

69 Request for information to the parties of 24 March 2006, question n°22.

70 Inco's response to the request for information of 24 March 2006.

71 […]*.

72 Inco's response to request for information of 2 March 2006, […]*.

being able to supply the plating market with sheared nickel products is a competitive advantage that allows the supplier to benefit from higher premiums […]*[73]: […]*.

(91) In its response to the Statement of Objections, Inco notes that the fact that some of the nickel products sold to the plating and electroforming customers is in the form of full plate cathodes demonstrates that it is possible and also done in practice. […]*.

(92) **Packaging.** Furthermore, some customers have mentioned a preference for small-sized packaging, such as 10 kg bags. In particular some customers have indicated in their response to the Commission's investigation that they prefer to have small-sized packaging in order to avoid any necessary investment in additional handling equipment that would be required to work in conformity with European health and safety rules[74]. [...]*.

(93) In light of the above, the Commission considers that, contrary to what the parties submit, the customers of nickel products for plating and electroforming applications are limited in their choice of nickel products and only nickel products of specific chemistry e.g. nickel purity, shape and size are suitable for their purposes.

Supply-side substitutability

(94) On the supply side, the parties submit in their notification[75] that the nickel products suitable for plating and electroforming are either produced by electrolytic refining (cathodes and crowns) or by carbonyl refining (pellets). The parties also claim that the investment would be limited for the producers to switch between the production of different nickel products, for example between rounds or crowns and cathodes, and that producers, traders or customers could easily purchase full plate cathode and shear them to produce strips or cut cathodes.

(95) While LME grade cathodes are available from a large number of nickel producers[76], crowns and pellets are only produced by a very limited number of nickel suppliers and mostly by the parties themselves[77]. As explained by the parties[78], the production of crowns entails higher investment costs ([…]*) and higher operating costs ([…]*) than cathodes. This was confirmed during the market investigation. Competitors active in the supply of nickel products to the plating and electroforming industry but not active in the

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73 […]*.

74 Council Directive 90/269/EEC of 29 May 1990 on the minimum health and safety requirements for the manual handling of loads where there is a risk particularly of back injury to workers (fourth individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC).

75 Form CO, Table 18, p. 85.

76 Form CO, Table 17, p.84.

77 Apart from the parties, Sumitomo is marketing "handy nickel" which is a round product and Tocantins is selling nickel coins that are produced by stamping the cathodes but they are not active in the EEA.

78 [...]*.

production of rounds and crowns submitted that they would have to make significant investment and bear additional operating costs to produce round finished nickel products (rounds or crowns)[79].

(96) With regard to the shearing operation, the Commission disagrees with the parties' views for the reasons detailed above (see recitals (83)-(90)).

(97) Sales of nickel products for plating and electroforming are usually made via distributors. Distributors are often specialised in the plating industry selling a range of proprietary chemicals and providing technical advice to their customers. Indeed, most end users use less than 100 MT of nickel per year[80].

(98) Suppliers of nickel products to the plating and electroforming industry have often developed a long-term business relationship with these distributors, by usually selecting one or two distributors by country. The Commission's investigation shows that most distributors usually have developed a long term relationship with one nickel supplier, which accounts for most or all its nickel purchases. Although this relationship is normally not covered by an exclusive contract, practice shows that the main nickel suppliers tend to have one main distributor for each national territory. For instance, the United Kingdom customers are mainly supplied on one hand by Cannock Chemicals Ltd for the Falconbridge products and on the other hand by Atotech U.K for Inco.

(99) The Commission also found evidence of this strategy for the distribution of nickel products for plating and electroforming applications in the parties' internal documents. [...]*[81].

(100) A nickel supplier producing nickel products suitable for plating and electroforming and willing to market these products, would have to face significant investment in time and money to establish and maintain comparable relationships with distributors. In fact, the Commission's investigation has shown that nickel suppliers have to respond on a daily basis to plating and electroforming customers' requests and organise regular meetings during the year with their distributors.

(101) **Services.** In addition to the elements cited above it must be stressed that nickel suppliers to the plating and electroforming industry also differentiate their offering from commodity nickel in that they usually provide services to the end customers.

(102) In their response to the Article 6(1)(c) decision[82], the parties emphasize the role of distributors in providing technical and support services to end customers rather than of the nickel suppliers which would not need to offer such services to sell to the plating and electroforming industry.

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79 See competitors' responses to question 30 of request for information sent 27 January 2006.

80 […]*.

81 [...]*.

82 Inco's response to the Article 6(1)(c) decision, at paragraphs 49-50.

(103) This view is contradicted by the parties' own assessment of their strengths and weaknesses [...]*[83]. This is also confirmed by competitors such as Eramet who submits that with regards to its marketing strategy towards plating and electroforming distributors and end users, they have the "*constant concern to support our customers (as much distributor or end-user) to optimize the use of nickel in their operations. The reliability of Eramet in both quality and service is the driving force of our marketing strategy*."[84]

(104) In light of the above, the Commission considers that, contrary to what the parties submit, there is limited supply side substitutability. First, a nickel supplier would need to make significant investments to be able to supply the wide range of nickel products suitable for the plating and electroforming applications. Second, the fragmented structure of the demand implies the need for a nickel supplier to develop and maintain a sales' network of distributors.

Pricing of nickel products to the plating and electroforming industry

(105) In the Form CO, the parties submitted information on premiums achieved for sales of nickel used in each group of applications[85]. This shows that nickel for plating and electroforming is sold at the highest premium compared to the other nickel products[86]. In the period 2002-2004, Inco's average premium (over the LME price) for the sale of nickel used in plating and electroforming was […]* USD/MT, compared to […]* USD/MT for stainless steel and […]* USD/MT for non ferrous alloys. This premium included a net marketing contribution for nickel sold to plating of […]* USD/MT, approximately three times the amount of the marketing contributions of nickel sold in stainless steel ([…]* USD/MT) and in non ferrous alloys ([…]* USD/MT). This is also reflected in the fact that Inco's sales to plating contributed to an average [25-40]* % of its total marketing contribution in the period 2002-2004 for only [20-35]* % of the total volume sold.

(106) During the in-depth market investigation, Inco submitted a complete set of data on premiums. These data confirm and reinforce the conclusions of the previous paragraph and show that finished nickel product prices appear to differ according to the application. Nickel product prices are usually set by reference to the LME quoted price plus a premium (or less a discount). For example, Inco's average premium over LME prices amounted to a […]* USD/MT in the stainless steel industry while the average premium is […]* USD/MT in the plating and electroforming industry in 2005[87]. Further, these premiums over the LME are not correlated between different end

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83 [...]*.

84 Eramet's response to question 35 of request for information of 23 March 2006.

85 Form CO, p. 192.

86 The information provided by the parties did not include the specialty products segment.

87 Inco's response to question 28 of the request for information of 24 March 2006.

applications: while Inco's average premium in stainless steel oscillated around a […]* USD/MT between 2001 and 2005, it followed an […]* trend in the plating and electroforming industry from an average value of […]* USD/MT in 2001 to an average of […]* USD/MT in 2005.

(107) Inco provided the Commission with data on the weighted average premium charged by Inco for its nickel product for alloy & foundry, plating, specialty product, stainless steel and super alloy.[88] The premiums were recorded monthly from January 2001 to December 2005. In principle the premiums for each type of end-use will not vary with common input costs. As a result, the correlation between the various premiums may provide some indication as to whether the different groups of product belong to the same relevant product market.[89] In particular the lack of correlation over time between premiums suggests that the product might not be in the same market.

(108) The coefficient of correlation between plating and stainless steel premiums for Inco nickel products is -0.020, which is sufficiently close to zero to indicate the absence of statistical relationship between these two premiums. When products are sufficiently substitutable, prices and in this case premiums should move closely together over time. This is clearly not the case for plating and stainless steel nickel products.

(109) In its response to the Statement of Objections, Inco submits that correlation analysis of prices provide relevant evidence for the purpose of market definition while an analysis of premiums do not. They argue that demand substitution work via end consumer prices and not premiums. Furthermore, the premiums used are mainly adjusted annually, limiting the potential for correlation. In addition, Inco argues that the premiums used by the Commission include cost elements, which may explain the different premium development.

(110) Inco provides estimates of price and premium correlations between different applications (monthly data; Inco data) showing that the correlation of actual prices (base prices plus premium) might be strong despite a low correlation of premiums. In the example provided by Inco the correlation between actual prices is in fact higher than the correlation of the base price (which is presumably the LME price). Inco claims that this shows that the Commission's analysis of premiums is misleading.

(111) Finally, Inco claims that the Commission has performed invalid manipulation of the data by not controlling for all common cost. Furthermore, Inco states that more appropriate statistical techniques demonstrate a close correlation between the different premiums.

(112) First of all, it has to be asserted that the parties do not address the fact that significant differences in premiums translate in significant price differences, which is in itself evidence of distinct product markets.

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88 Inco response to request for information of 24 March 2006, question 28.

89 One well-known shortcoming of price correlation is the fact that such correlation might be spurious. In this particular case all prices for different end-use would be highly correlated over time as much of their variation results from the volatility of the LME. Using premium instead of final price removes this concern.

(113) Secondly, as regard correlation Inco's argumentation relies exclusively on demand substitution. For two applications between which there are low switching cost different premiums for the different applications would result in significant supply reactions though. The low premium correlation does show that such supply substitution did not take place in the markets concerned supporting the Commission's argument that nickel producers are to a large extent specialized in supplying certain applications.

(114) Thirdly, Inco fails to take into account the industry specific pricing rules. In the nickel industry prices negotiated with customers are premiums. Customers who are charged with a relatively high premium on LME prices will switch to another supplier. Hence, premiums of different applications which form part of the same relevant product market will be positively correlated due to demand substitution. Hence, even from the perspective of demand substitutability premiums are the relevant competition factor to assess.

(115) Fourthly, with respect to the argument of annual adjustment (which is not supported by any evidence) it has to be recalled that the Commission's analysis rest on a 5 year period, therefore it is not affected by this criticism.

(116) Fifthly, with respect to the argument that the Commission's assessment is misleading because cost factors (like transportation cost or packaging) are not being included Inco fails to observe that significant differences in consumer preferences - for example with respect to packaging - do indicate different relevant product markets.

(117) Sixthly, regarding the correlation analysis provided by Inco it has to be asserted that the parties' analysis also […]*. Inco's analysis though is limited to […]*, while the Commission's analysis takes into account five years. Based on this broader and therefore more robust data base the Commission finds – in contrast to Inco's finding - […]*. In such a situation the correlation of actual prices (LME price plus premium) will be lower than the correlation of the base price (LME price). Hence, Inco claims that […]* is not correct if based on the broader and more robust data base applied by the Commission. In any case the Commission – see arguments above - consider premiums the right competitive factor for market definition purpose.

(118) Seventhly, with respect to the claim of *"invalid manipulation"* of data it has to be pointed out that the failure of the Commission to control for all common cost factors will result if at all in a higher positive correlation. […]*. Hence, the Commission's approach provides a conservative, upper boundary of the actual correlation.

(119) Finally, Inco did not provide any substantiated evidence regarding their claim that more sophisticated statistical tools would result in opposite results.

A separate market for plating and electroforming applications is supported by the parties' internal documents

(120) The parties' documents, be they public or internal, point to the existence of a distinct product market which requires distinct pricing and marketing policies from other applications of nickel.

(121) For example, Inco devotes an entire and separate section of its website's "customer section" to the so-called "nickel plating products" where they state that their plating products "*are of the highest quality and contain minimum impurities so platers are assured of consistent results. We maintain a worldwide sales and distribution network and provide clients with technical support to fit their needs*."

(122) A similar presentation can be found on Falconbridge on its website: "*Falconbridge is the second largest supplier of electrolytic NICKEL in the western world. Through over seventy years of participation in the industry and the development of NICKEL products to satisfy a wide range of applications, the name Falconbridge has become synonymous with quality, service and dependability. Falconbridge quality is the result of research and innovative technology and is reflected in the consistent high purity of its NICKEL products. Falconbridge electrolytic NICKEL, contains the lowest concentration of total impurities of any commercially available NICKEL. For use as anodes in electroplating applications, these quality products are available as 25 mm squares and full plate cathode. Falconbridge service and dependability are well known and firmly established. NICKEL sales are supported by an experienced technical staff, capable of providing assistance in the evaluation of customer problems*" and "*Electrolytic nickel CROWNS were especially developed and patented by Falconbridge to provide an improved alternative to sheared cathode squares for use in titanium baskets. (...) The nickel CROWN shape provides smooth-flowing, easy handling properties and promotes good settling in anode baskets, so important in preventing void formation and basket damage. Electrolytic or high purity nickel continues to be preferred by most platers due to the low level of residuals for which Falconbridge electrolytic nickel products are second to none*."

(123) In the internal documents of the parties, the "plating market" is also mentioned and analyzed on several and numerous occasions as, for example, in the following documents:

- […]*[90] […]*;
- […]*[91] […]* [92];
- […]*;
- […]*.

Conclusion

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[90] Document submitted in response to question 19 of the request for information of 24 March 2006 – reference 00000028.pdf.

[91] […]*.

[92] […]*.

(124) On the basis of the above considerations, it may be concluded that the supply of nickel products to the plating and electroforming industry constitutes a separate relevant product market.

Supply of high purity nickel for the production of super alloys / super alloys used in safety critical parts

(125) As indicated above, nickel is used in a wide range of melting applications. A specific end application of nickel is the production of super alloys or "high performance" alloys[93]. Super alloys are alloys which have superior mechanical strength, good surface stability and corrosion resistance, and may have the ability to withstand high temperature without oxidising or losing mechanical properties[94]. They generally have a nickel content greater than 50% of the alloy[95] and contain other alloying elements such as aluminium (Al), titanium (Ti), and chromium (Cr), as well as columbium (Cb), molybdenum (Mo), tungsten (W) or tantalum (Ta) or cobalt (Co) for their specific property advantages[96].

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93 The term "high performance" alloy is a generic term for special nickel-, cobalt- and iron-base alloys developed to withstand extreme conditions of heat, wear and corrosion. This group of alloys includes superalloys, corrosion-resistant alloys, and wear-resistant alloys. However, while the term superalloys is nominally reserved for those alloys which are used at service temperatures of above 800°C, in practice, it is also used for the alloys developed for corrosion and wear resistance (see "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 163.

94 Response of Inco to question 8 of the request for information of 2 March 2006, p. 11; response of Ross & Catherall to question 4 of the request for information of 20 March 2006.

95 Form CO, footnote 62, p. 80 and p. 92, [...]*.

96 […]*; and "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 164.

Introduction

(126) Super alloys are used in applications requiring operation in high-temperature and high-stress environments. Such applications include in particular the power generation (industrial gas turbines ("IGTs"), nuclear reactors), aerospace (various engine components, turboprop engines, rocket engines), and medical (prosthetic implants) industries[97]. A specific category of super alloys are super alloys used in safety critical rotating parts, for example turbine engine blades and discs for jet aircrafts.

(127) There are a few dozen super alloy manufacturers, mostly located in the U.S., the EU, and to a limited extent in Japan. The main super alloy manufacturers include the following companies[98]:

- U.S.-based (often with United Kingdom subsidiaries) companies : Allvac (Allegheny group), Carpenter Technology, Certified Alloy Products Inc. ("CAPI"), Haynes International, Howmet (Alcoa group), Precision Castparts Corporation ("PCC"), and Special Metals Corporation (a former Inco subsidiary);

- European-based companies : Aubert & Duval (Eramet group), Böhler Uddeholm, Firth Rixson, Imphy Alloys (Arcelor group), ThyssenKrupp VDM, Sandvik/Kanthal, and Vacuumschmelze GmbH and Co. KG; and

- Japan-based companies: Daido Steels, Hitachi Metals, and Mitsubishi Materials.

(128) These companies produce super alloys that are purchased by manufacturers of spare and original parts for jet engines and of industrial gas turbines such as General Electric, Honeywell, Pratt & Whitney (a division of United Technologies Corporation), Snecma or Rolls-Royce.

Demand-side substitutability

(129) As regards demand substitutability, the Commission's in-depth market investigation has shown that not all finished nickel products from any supplier can be used interchangeably for the production of super alloys, and even less so as regards super alloys used in safety critical parts. This derives from considerations linked to the purity of the nickel input, constraints on shapes, need for certification of the nickel, lack of constraints exercised by secondary nickel and inability of customers to upgrade other nickel products than high purity ones.

(130) **Purity and impurities.** As explained in the following paragraphs, the nickel used for the production of these super alloys must meet strict requirements in terms of chemical composition/purity.

(131) High purity nickel distinct from nickel used for other applications is required for the production of both super alloys and super alloys used in safety critical (rotating) parts.

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97 Response of Inco to question 8 of the request for information of 2 March 2006, p. 11.

98 […]*[...]*.

Super alloy customers' specifications for the nickel they use are generally based, with individual variations (generally stricter and covering up to 43 elements rather than 21 in the ISO standard), on the international standard ISO 6283 for NR 9995 for high purity (99.95%) refined nickel, which is stricter than the standard LME grade 99.8% nickel (ASTM 39-79).

(132) Such specifications relate not only to the level of nickel content, which must be higher than 99.8% (often even higher than 99.95%), but also specifically impose strict limits on the presence of certain impurities and other trace elements (such as carbon, lead, zinc, sulphur, copper, selenium, etc.) measured at the level of parts-per-millions ("ppm" or 0.0001%).

	ISO 6283: 1995E NR9995	ASTM B39-79 (LME grade)
Ni min.	99,95	99,8
Ag max.	1	
Al max.	5	
As max.	1	50
Bi max.	0,5	50
C max.	150	300
Ca max.		
Cd max.	1	
Co max.	5	1500
Cu max.	10	200
Fe max.	150	200
Mg max.		
Mn max.	5	50
O max.		
P max.	2	50
Pb max.	1	50
S max.	10	100
Sb max.	1	50
Se max.	1	
Si max.	10	50
Sn max.	1	50
Te max.	0,5	
Tl max.	0,5	
Zn max.	5	50
Total max. impurities	**361**	**2.750**

(133) A product that has a high percentage of nickel, but contains impurities exceeding these strict impurity limits, could nevertheless have negative consequences on the physical properties and performance of the super alloy.

PCC[99]: *"The company requires that the nickel purity level must be 99.97% or higher, with traces elements such as lead, zinc, copper, selenium, antimony, silver, tin, zinc, cadmium, tellurium, bismuth, and thallium below 1 ppm or 0.5 ppm. Sulphur, another trace element, must be below 10 ppm. This high purity level is required because higher concentrations of trace elements give rise to lower melting point eutetics, meaning that*

[99] PCC's response to the Commission's request for information of 26 January 2006.

the component has a flaw that may cause it to fail at a lower temperature than was intended. Small variations in trace elements impurity content may sharply alter critical fatigue properties required for these super alloys. Failure due to impurities in a safety critical component could have a devastating effect".

A producer of super alloys[100]*: "The requirements of our customers with regard to our own products are directly related to specifications we impose to our suppliers. The properties (mechanical, surface properties, corrosion resistance…) of our products depend directly on the level of impurities in the nickel products we purchase."*

(134) The maximum levels of impurities and trace elements are even tighter as regards super alloys used in safety-critical rotating parts.

Special Metals[101]: *"Special Metals makes a distinction between critical rotating parts which have to be stronger and more resistant as they are under more stress, and other parts. Engine manufacturers' specifications are more stringent for critical rotating parts. Special Metals uses high purity nickel for both critical rotating parts and other parts"*

Ross and Catherall[102]*: "Nickel for superalloys with tight trace and gas limits (IGT and Aerospace alloys) must be of the >99.8% type (Inco pellet, Eramet or Falconbridge Cathode".*

(135) In its response to the Article 6(1)(c) decision, Inco claims that alloy manufacturers have significant flexibility and could apply different specifications and limits on specific impurities to the nickel they use. According to Inco, some super alloy manufacturers do not even require 99.95 per cent nickel ([…]*)[103].

(136) As indicated above, each super alloy customer sets its own specifications for the nickel they purchase (See Confidential Annex II to this Decision). Some super alloy customer specifications may not require a minimum content of nickel of 99.95 per cent (which is the ISO standard ISO 6283 for NR 9995 for high purity nickel). However, conversely, all of these customers require nickel products according to specifications stricter than the LME 99.8% grade nickel both in terms of nickel concentration and in terms of maximum levels of impurities[104]. The nickel products meeting all these strict limits on other chemical elements than nickel have by definition a very high nickel content, since the balance is nickel.

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100 Response of a producer of super alloys to the request for information of 26 January 2006.

101 Minutes of conference call with Special Metals, 22 February 2006.

102 Ross & Catherall's response to the request for information of 26 January 2006.

103 Response of Inco to the Article 6(1)(c) decision, at paragraph 65.

104 See Annex II to this Statement of Objections setting out super alloy manufacturers' specifications for high purity nickel.

(137) **Shapes.** In the Form CO[105], the parties state that although certain nickel shapes may be more desirable from a handling standpoint (such as shapes that can be more easily placed on conveyor belts to feed melting furnaces, or having regard to the size of the furnace), nickel for melting applications is melted in the alloying process and generally does not require any particular shape. The parties however recognize that certain nickel products are commonly used in each application, and indicate that electrolytic cut cathodes, squares, rounds and crowns, as well as carbonyl pellets are commonly used in the production of non-ferrous alloys[106].

(138) The Commission's investigation has shown that the main nickel products used for super alloy production are 4"x 4" and 2"x 2"[107] cut cathodes (electrolytic process) and pellets (carbonyl process)[108]. Smaller 1"x 1" cut cathodes are designed for use in plating and are more expensive nickel products[109]. For example, PCC indicates that, as regards shape and size requirements, it can use pellets and cathodes (of a maximum size of 4"x 4", typically 2"x 2") because of its handling equipment for the vacuum induction and melting process.

(139) **Certification procedure.** Even if a nickel product were to meet the required purity and impurities levels as well as the shape constraints, it would still need to be certified in order to be used by a super alloy manufacturer.

(140) Almost all super alloy producers apply a certification procedure to select a new nickel supplier. Furthermore, super alloy producers are often required to certify their nickel sourcing vis-à-vis their own customers, downstream end users such as producers of jet engines, which require certification and traceability of nickel suppliers[110]. Certification procedures are required for most of alloys or super alloys manufacturers having aeronautical construction as the end market. All the industrial lines from the base materials up to the manufactured products have to be certified for one or a range of products. Such a process is very time consuming and can take up to five years for a single super alloy customer, before the beginning of any regular sales. The super alloy producer must have its own products (and raw material suppliers) certified by the engine manufacturers (GE, Pratt, Rolls Royce) for each application that it will be used for (a nickel supplier can be certified to be used in the production of a super alloy that can be used for a certain engine part but not certified for the same super alloy used in another engine part). Super alloy producers may thus need the approval of their own customer to change nickel supplier.

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105 Form CO, p. 80.

106 Form CO, p. 86, Table 19.

107 For example, as noted by Inco in its response to the Article 6(1)(c) decision, Falconbridge's superelectro product, which is marketed specifically towards demanding melting applications, is sold as 2"x 2" squares.

108 Inco's [...]* responses to the request for information of 24 March 2006, respectively questions 2 and 1.

109 See e.g. CAPI's response to question 15 of the request for information of 26 January 2006.

110 Form CO, p. 181.

(141) The certification is based on the following parameters: nickel purity and level of trace elements, product consistency, traceability and reliability and quality control management. Each delivery to super alloy customers must comply with their own specifications including impurity levels, quality control, packaging and documentation.

(142) Inco claims that the qualification procedure could be started immediately and would be concluded in less than 2 months[111]. Many of the major nickel producers would have already obtained ISO certification of their production process. This could accelerate their qualification as ISO certification would satisfy alloy manufacturer's requirements regarding record keeping and quality control of the nickel producer[112]. The Commission's investigation has shown that the certification procedure can be generally lengthy (up to five years) and costly. Although individual super alloy manufacturers' certification procedures may vary depending on the requirements of their own customers, the certification of a new nickel supplier is generally a lengthy process whose cost is supported by super alloy manufacturers. For most demanding end applications, the certification process may include tests of the final product manufactured with the nickel-based super alloy:

Ross & Catherall[113]: *"A sample batch of product would be requested from the potential supplier and would be submitted for independent analysis (...). This would be followed by a trial melt with additional sampling and testing. (...) Estimated time for approval 3 months costs of 5,000 to 10,000 GBP"*.

Another respondent stated that its supplier qualification procedure may last from 6 to 18 months and cost the company in excess of 42,000 euros. The procedure consists essentially of 5 steps: nickel product analysis for chemistry, sample testing analysis (such as mass spectrometer), pilot heats with the nickel product, larger qualification heats, and final product evaluation.

Carpenter[114]: *"Carpenter must go through the whole process of receiving material from the supplier, making products from the material, and then performing quality control tests on those products. This process provides information on the quality of the material supplied by the supplier. This whole process could take anywhere between six months and a year, and is very costly"*.

PCC[115]: *"The certification process is a follows : First, the nickel supplier must provide samples from 10 different material lots for chemistry and size testing to ensure that the material in question meets the required specification. Next, the supplier must provide over 100 tons of material for melting at the Company's operations. The Company purchases all of this material. The material is used on lower quality requirement, then*

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111 Response of Inco to the Article 6(1)(c) decision, at paragraphs 73-74.

112 Response of Inco to the Article 6(1)(c) decision, at paragraph 76.

113 Ross & Catherall's response to the request for information of 26 January 2006.

114 Response of Carpenter to question 12 of the request for information of 26 January 2006.

115 Response of PCC to the Commission's request for information of 26 January 2006.

retested in the final shape as castings or ingots to the required chemistry, non-destructive ("NDT") testing, and mechanical property specifications. It the material passes both of these steps, it next must be used in customer-approved test products and rested to required chemistry, NDT, and mechanical specifications with the customer. If the material passes this step, the test parts are placed in test engines or airframes for direct product testing with the customer. The time period is 1 to 2 years; the cost is approximately 20 million USD".

(143) As a result, customers face additional barriers to substitute nickel available from current certified suppliers with that from a new nickel supplier (assuming that their products may meet the specific purities and impurities and shape specifications) due to the cost and time of certifying a new supplier.

(144) **Use of secondary nickel.** In its response to the Article 6(1)(c) decision, Inco claims that secondary nickel is used in all melting applications, including the most critical applications such as super alloys and super alloys used in safety critical parts. Secondary nickel comes from a range of sources: revert (from the first use application, e.g. the production of super alloys), prompt (from the subsequent processing of such alloys, e.g. casting or forging) and old scrap recovered from the previous use of similar alloys (e.g., jet engine turbines)[116]. Such secondary nickel is generally recovered, cleaned and redirected for recycling either by the alloy producers, their customers that purchase super alloys (e.g. jet engine manufacturers) or third parties that specialise in this recycling. An Inco customer would estimate that half of the nickel used in super alloys consists of secondary nickel from various sources (prompt, revert, and old scrap). Inco notes that it would be much more efficient for alloy manufacturers to realise the value contained in parts originally manufactured from super alloys (which contain a mixture of metals refined to a specification) than to recycle such material through stainless steel production of a nickel smelting process[117]. Third parties would advertise that they market "alloy scrap intended for use in high duty nickel alloys, and scrap blending of nickel-based alloys"[118].

(145) Many super alloy manufacturers indicated in response to the Commission's investigation that they do not use secondary nickel because it does not meet their requirements for the quality of nickel. As acknowledged by the parties, those using secondary nickel mostly use internal scrap (revert) or scrap returned by their customers (prompt)[119]. Such secondary nickel is also subject to a qualification process to determine that it meets the super alloy manufacturers' strict requirements in terms of chemical composition; the scrap must be processed by an approved scrap processor source. For instance, Ross & Catherall indicates that nickel for super alloys must be primary and that secondary nickel cannot be used due to technical restrictions in terms

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116 Response of Inco to the Article 6(1)(c) decision, at paragraph 9.

117 Response of Inco to the Article 6(1)(c) decision, paragraph 10.

118 Response of Inco to the Article 6(1)(c) decision, paragraph 79.

119 Form CO, p. 66: *"Secondary material recycled for use in super alloys or super alloys used in safety critical parts is likely to be prompt or revert".*

of chemistry. Ross & Catherall further indicates that there is some limited use of nickel based scraps generated within the super alloy sector, but this is limited by technical constraints (including chemistry) and specification/approval issues. The specifications of the customers of super alloy manufacturers also dictate the ratio of virgin (raw materials), customer alloy returns (scrap from super alloy manufacturers' own customers, closed loop) and scraps generated at the super alloy manufacturers (internal scraps make up for any losses due to melting and running systems, closed loop): a product typically contains a maximum of customer-supplied scrap, minimum amount of virgin and a balance of internal scraps. Material from outside this loop cannot be introduced without the approval/specification of the super alloy manufacturer's customer[120].

(146) Such secondary nickel does not, however, constitute a supply source competing with the sourcing of primary high purity nickel from the relevant nickel producers. The use of such secondary nickel avoids wasting valuable high purity nickel, and only reduces the quantities of primary high purity nickel that the super alloy manufacturers need to purchase. Supply of secondary nickel is constrained by its limited availability[121]. Such availability is itself a function of the volumes of primary high purity nickel initially purchased and of the production process of the customer. As such it is not "priced" and cannot constitute a constraint on the balancing of demand and supply for the high purity nickel[122].

(147) In its response to the Statement of Objections, Inco alleges that the Commission fails to take due account of the role of secondary nickel, and that super alloy customers in fact do use secondary nickel from specialist scrap recyclers (in addition to prompt and revert) for the production of super alloys. The Commission however notes that Inco does not address its assessment that the availability of secondary nickel is constrained and that third-party secondary nickel suppliers do not exercise any competitive constraint on primary nickel suppliers, as there is a technical maximum limit on the amount of secondary nickel that can be used.

(148) **Upgrade of commodity nickel.** In its response to the Article 6(1)(c) decision, Inco states that all super alloy manufacturers have vacuum furnace (or vacuum induction melting (VIM) furnace) technology. Inco claims that unwanted impurities could be

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120 Response of Ross & Catherall to questions 18, 20, 22 and 43 of the request for information of 26 January 2006.

121 Response of Ross & Catherall to question 43 of the request for information of 26 January 2006.

122 In its response to question 16 of the request for information of 20 March 2006, Ross & Catherall indicates that "*Secondary nickel is used in form of scraps generated at the company (300 MT per annum (both nickel and cobalt based in 300 MT) – cannot be separated from cobalt value) and some purchased from the scrap trade (50 MT per annum). Scrap generated at the company remains within our production loop. For every cast made, a certain amount of metal is scrapped in the form of header and running systems. We use internal scrap to make-up this portion of the melt. There is some limited use of scraps from the scrap trade for turbocharger and Industrial Gas Turbine alloys but this amount is no more than 50 MT per annum, and is of negligible importance." "In addition (…), customers do supply their scrap for melting and this can account for a significant portion of the charge make-up. However, the use of customer scrap is fixed and controlled by 'Methods of Manufacture' and limited by the amount of scrap generated by the customer. This is unlikely to have a significant effect on the use of primary nickel.*"

removed by using vacuum furnace technology. The raw materials (such as nickel, cobalt and iron) that are mixed in a vacuum furnace to produce a given alloy would be upgraded during the process of melting as follows: the molten metal mixture obtained in the vacuum furnace is tested. If the level of a particular deleterious element (e.g., lead) is too high in this molten mixture, the level of the vacuum is merely increased, which would turn the more volatile elements, such as lead, into a gaseous state, and this would be removed by the vacuum at such high temperatures. Following this, a further sample would be taken, until the specified deleterious elements are within specification, and then the melt would be accepted. Inco further claims that many super alloys for safety critical parts are triple melted, involving a much more arduous upgrading and refining procedure of the super alloy mixture, and this would typically remove the vast majority of any deleterious elements.

(149) However, this is not corroborated by the Commission's in-depth market investigation.

(150) First, common sense indicates that super alloy manufacturers would not purchase high purity nickel which attracts higher premiums if they could use lower grade nickel, and that any reduction in impurities achieved through the VIM technology would already be taken into account in the specifications set by super alloy manufacturers for their high purity nickel needs.

(151) Secondly, contrary to what the parties claim in the Form CO[123], no nickel customer that produces super alloys (or super alloys used in safety critical parts) indicated to the Commission that it can purchase commodity nickel products and upgrade them to higher grade products meeting their requirements by removing unwanted impurities. Customers indicate that this is not possible and that, in any event, they do not have the necessary equipment, which would require significant investments and costs.

(152) Thirdly, super alloy manufacturers explain that impurities – which are elements affecting the performance or processability of a super alloy – must be tightly controlled. Impurities control can be achieved both by: (i) exclusion during selection of the original feedstock, raw material specifications and chemistry testing, and (ii) refining and filtering during VIM. To ensure super alloy manufacturers' end material meets their customer requirements, the feedstock must be carefully selected to make sure the impurity content is low enough to achieve the desired final level. In addition, evaporation, slag/metal reactions and filtering are used to remove impurities during the VIM. However, the VIM process only allows super alloy manufacturers to remove impurities that can be turned into a gas, which is not the case of all impurities (some impurities, for example sulphur, do not form gas, but a liquid); other elements, such as tellurium and selenium, cannot be removed under vacuum processing. Furthermore, according to super alloy manufacturers, the VIM process is not efficient in doing so. This is why super alloy manufacturers have to keep incoming levels of these impurities to low levels[124]. Last,

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[123] Form CO, pp. 80, 92 and 95.

[124] A market player explains that: "*Dissolved gases (O, N, H) are removed by the vacuum but low levels of other elements (Bi, Cu, Pb, and S) may ever be removed by vacuum evaporation. The process is exponentially related to the vacuum level one can achieve, the amount (lbs or Kgs) of material being melts, the surface area of the melt pot and time. Other elements (such as Te and Se) can never be removed to the levels required. In addition, other elements required (such as Al) can be lost to evaporation as well, therefore, the refining process is limited to time and control of the elements. Final disadvantage to*

the production of super alloys also requires a very reproducible process, with extremely consistent charge materials to ensure that the proper chemical reactions occur to the desired level. In this respect, there is less control in the reaction when using 99.8% purity nickel which has higher and more variable impurity levels than high purity 99.9% nickel. Use of lower grade nickel would yield lower quality, higher cost products, and a net 25-50% reduction in available capacity[125]. Use of the VIM process does not therefore enable super alloy manufacturers to purchase lower grade products, deviating from their specifications. Super alloy manufacturers indicate that they do not purchase outside their specifications.

(153) In its response to the Statement of Objections, Inco simply reiterates that super alloy customers can upgrade less pure nickel in a variety of ways depending on the impurities involved (e.g. air melt, VIM furnace). The Commission however notes that Inco does not address its assessment that the specifications set by super alloy manufacturers already take into account the upgrading resulting from the VIM process, nor the fact that the VIM process is not efficient to remove all impurities, notably gaseous impurities.

(154) In conclusion, the Commission's in-depth investigation has shown that super alloy manufacturers can only use very specific high purity nickel products for their super alloy production, which must meet very tight specifications on the minimum content of nickel and maximum levels of trace elements. Furthermore, super alloy manufacturers' customers require approval of super alloy manufacturers' nickel supplies, all chemistry specifications, suppliers, equipment and procedure, which means that super alloy manufacturers have no flexibility to switch between the nickel products of different nickel producers or to other nickel sources.

Supply-side substitutability

(155) As regards supply side substitutability, in its response to the Article 6(1)(c) decision, Inco states that although not all producers supply material of a suitable composition, there are many producers that would supply suitable nickel. In addition, industry standard test certificates are available for nickel which is not sourced directly from the producer. It would be possible for any super alloy manufacturer to request a range of batch certificates from a trader and select particular batches of nickel with suitably low levels of deleterious elements[126]. For instance, a customer of Inco, […]*, would have certified and purchased nickel from at least seven different suppliers for use in critical rotating parts of jet engines ([…]*)[127].

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removing elements (such as Pb and Bi) with this process is that the elements do not just disappear: they condense on the furnace walls or the vacuum pumps causing further containment or environmental problems."; see also e-mail from Carpenter Technology of 28 April 2006 and response of Ross & Catherall to question 16 of the request for information of 26 January 2006.

125 See e-mail from Carpenter Technology of 28 April 2006.

126 Response of Inco to the Article 6(1)(c) decision, at paragraphs 86-87.

127 See Executive summary of the response to the Article 6(1)(c) decision, recitals 2.1 and 2.4, pp. 2 and 3, and paragraphs 70 and 86 of the response to the Article 6(1)(c) decision.

(156) The Commission notes that Ross & Catherall actually has three different nickel product specifications according to the different end applications for which it purchases nickel. Ross & Catherall's three specifications are "Nickel Pellet – Specification for Inco product", "Nickel Cathode – Specification for Falconbridge/Eramet product", and "Nickel Commercial – Specification for OMG/Russian product"[128]. Ross & Catherall indicates that OMG/Russian type material can be used for Turbocharger alloys, but that Inco or Eramet must be used due to chemistry restrictions for Industrial Gas Turbine alloys and Aerospace alloys[129]. Ross & Catherall also states that "*nickel for superalloys with tight trace and gas limits (IGT and Aerospace alloys) must generally be of the >99.8% type (Inco Pellet, Eramet or Falconbridge Cathode). Superalloys with less stringent specifications (Turbochargers) can use <99.8 material such as OMG and some grades of Norilsk material.*"[130] Last, Ross & Catherall indicates that it has "*also tested QNI briquettes (a refinery of BHP Billiton/WMC) but found them to be high in oxygen content and not suitable for vacuum melting*"[131] and, contrary to Inco's contentation, that it has "*no experience of nickel dealing with Jinchuan, Bindura, Tocantins, Sumitomo, Anglo American and BHP Billiton direct.*"[132] For part of its demand, Ross & Catherall thus requires high purity nickel that only Inco, Falconbridge and Eramet can supply.

(157) According to the Commission's notice on the definition of the relevant market[133], supply-side substitution requires that suppliers be able to switch production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices. The Notice adds that when these conditions are met, the additional production that is put on the market will have a disciplinary effect on the competitive behaviour of the companies involved. It further notes that when companies market a wide range of qualities or grades of one product, even if for a given final customer or group of consumers, the different qualities are not substitutable, the different qualities will be grouped into one product market provided that most of the suppliers are able to offer and sell the various qualities under the conditions of immediacy and absence of significant increase in costs.

(158) The Commission considers that these conditions are not met in the particular circumstances of high purity nickel.

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128 Response of Ross & Catherall to question 2 of the request for information of 20 March 2006.

129 Response of Ross & Catherall to question 7 of the request for information of 20 March 2006.

130 Response of Ross & Catherall to question 24 of the request for information of 26 January 2006.

131 Response of Ross & Catherall to question 12(d) of the request for information of 20 March 2006.

132 Response of Ross & Catherall to question 15 of the request for information of 20 March 2006.

133 Commission Notice on the definition of the relevant market for the purposes of Community competition law, OJ C 372, 9.12.1997, p. 5.

(159) The parties themselves acknowledge in the Form CO[134] that specific impurities in the nickel are important in determining the properties of the final alloy, and that not all nickel producers supply material of a suitable composition to be used in all melting applications. The Commission's in-depth investigation has shown that not all nickel producers can produce high purity nickel suitable to manufacture super alloys/super alloys used in safety critical parts. The comparison of the specifications of the finished nickel products of a range of nickel suppliers[135] and the specifications required by a range of super alloy producers[136] shows that only four to five suppliers (Falconbridge, Inco, Eramet, Sumitomo and Norilsk) are able to produce finished nickel products with a sufficiently purity to meet the specification of super alloy producers.

(160) Even if it cannot be excluded that some nickel producers may be able from time to time to produce some high purity/low impurities nickel that meets the chemical specifications of super alloy customers, their production does not (and cannot) meet the consistency specifications of such customers. Even if it is possible to select some batches in the production and rely on industry certificates to establish their suitability, this does not detract from the fact that the supplier in question does not produce consistently high purity quality. Lot selection and systematic additional testing of the selected batches, without guarantees of a regular supply, add costs for both the producer and the customer. At most, this could only represent a source of additional spot supplies for the super alloy manufacturers.

(161) The issue is therefore whether other nickel suppliers could adjust their nickel production process at competitive costs so that they could enter quickly on the market for the supply of high purity nickel used in super alloys.

(162) The market investigation has confirmed that any supplier trying to supply high purity nickel used in super alloys would face significant technological and commercial barriers and could not enter without incurring significant risks and time delays. (See below recitals (383) to (399)).

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134 Form CO, p. 80.

135 See Annex Ia to this decision.

136 See Annex II to this decision.

Pricing

(163) […]*. [...]*[137]

Conclusion

(164) In its response to the Statement of Objections, Inco limits itself to maintain that a single market exists for the supply of nickel, including primary and secondary nickel, listing a number of factors already mentioned in its response to the Article 6(1)(c) decision. The Commission does not see any new element allowing it to depart from its assessment set out in the Statement of Objections.

(165) In conclusion, the Commission thus takes the view that it is appropriate to define a distinct product market consisting in the supply of high purity nickel used for the production of super alloys. It is also possible that nickel used in the production of super alloys used in safety-critical parts, for which quality requirements are even stricter, could constitute a narrower, distinct, product market, but this issue can be left open for the purposes of the present Decision.

Cobalt product markets

Product market delineation proposed by the parties

(166) The parties submit that the relevant product market is the market for the supply of all cobalt finished products. There would be strong demand-side and supply-side substitutability between the various finished cobalt products. The parties state that this definition is consistent with the approach taken by the Commission in previous decisions, which left the market definition of cobalt products open[138].

Assessment of the Commission

(167) Contrary to the parties' approach and similarly as for nickel, the market investigation has indicated that it is more appropriate to define the relevant product markets according to end applications. This is due to differences in the structure of the demand, demand substituability, in technical and delivery requirements and due to limited supply-side substitutability for some finished cobalt products. In particular, a distinction must be made between the chemical and the metallurgical end applications of cobalt, as metallurgical applications can only use metal cobalt. Furthermore, there appear to be specific end applications of cobalt that require high purity cobalt products, such as super alloys or batteries.

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137 [...]*.

138 Case No COMP/M.3767 BHP/WMC decision of 26 April 2005.

(168) While there are probably distinct product markets per end application of cobalt, a precise delineation is not necessary for the purposes of the present Decision for most end applications. Only one relevant product market (supply of high purity cobalt for super alloys used in safety critical applications), where specific competitive concerns have been identified, is further discussed below.

Supply of high purity cobalt for the production of super alloys used in safety critical parts

(169) A particular end application of metallic cobalt is the production of super alloys, a specific category of which are super alloys used in safety critical applications (including in particular moving parts of a jet engine, such as jet engine blades, and turbines used for energy generation, nuclear reactors). Super alloys are one of the major end-use applications of cobalt, accounting for 20-25% of total cobalt demand[139].

(170) The Commission's in-depth investigation has revealed that, contrary to nickel where it could be left open for the purpose of this Decision whether the market for the supply of high purity nickel for super alloys used in safety critical parts is a separate market, it is necessary to distinguish as a relevant product market the supply of high purity cobalt for super alloys used in safety critical parts.

(171) While it is true on the demand side that the specifications for nickel suitable for super alloys used in safety critical parts are more stringent than those for super alloys, the same high purity nickel products that meet the specifications for super alloys also meet the specifications for super alloys used in safety critical parts. Because of such supply-side substitutability, these can be assessed as one relevant product market.

(172) On the contrary, the Commission's investigation has indicated that not all cobalt products that are suitable for use in super alloys meet the specifications for high purity cobalt for super alloys used in safety critical applications. Due to limited supply-side substitutability for high purity cobalt suitable for super alloys used in critical applications, the market for the supply of high purity cobalt used in critical applications should be assessed as a relevant product market separate from the market for the supply of cobalt for super alloys in general.

(173) The exact percentage of this demand which is for the production of super alloys used in critical applications is not known, but can be estimated at approximately […]* MT based on the sales of Inco and Falconbridge's sales of high purity cobalt to super alloy manufacturers, and from the consumption of some large super alloy producers

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139 "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 163. This is consistent with the estimate at the Cobalt Development Institute (CDI) conference on 18-19 May 2005 that cobalt demand for super alloys represented approximately 23% of total cobalt demand in 2005, and information on the website of the Cobalt Development Institute, Cobalt Facts, "Cobalt Supply and Demand" at http://www.thecdi.com/cdi/images/ documents/facts/Cobalt_Facts_Supply-Demand_000.pdf.

specialised in the manufacturing of super alloys safety critical parts (triple vacuum melted)[140].

Demand-side substitutability

(174) **Metallic forms of cobalt.** According to the parties, for many end applications, customers would use a range of different cobalt products[141]. However, the chart submitted by the parties in the Form CO shows that only cobalt metal and recycled revert are the forms of cobalt products commonly used for super alloy production. The Commission's investigation has confirmed that super alloy manufacturers cannot use chemical cobalt products for the production of super alloys as chemical cobalt does not have the same purity level as metallic cobalt. This is not contested by Inco in its response to the Article 6(1)(c) decision. However, Inco argues that there would be considerable supply-side substitutability (see below)[142].

(175) **Purity and impurities.** As explained in the following paragraphs, the cobalt used for the production of super alloys for critical applications must be of the highest purity. It must meet strict requirements in terms of its chemical composition/purity.

(176) High purity cobalt distinct from cobalt used for other applications is required for the production of super alloys used in safety critical parts. Super alloy manufacturers indicate that they require specific cobalt products for the production of super alloys used in critical applications, which must meet their strict specifications. Such specifications relate not only to the level of purity of cobalt but more importantly impose strict maximum levels measured at the ppm levels for specific impurities and other trace element (such as lead, zinc, sulphur, copper, selenium, etc.)[143]. By definition, high purity cobalt meeting all these strict limits will have a high cobalt content, often higher than 99.8%.

(177) In its response to the Article 6(1)(c) decision, Inco claims that super alloy customers can accept a range of different cobalt purities, including some lower purity cobalt ([…]*) which includes largely harmless impurities such as nickel and which is currently used to supply super alloy manufacturers, and which has been used historically to supply cobalt for super alloys used in the Russian aerospace and defence industries prior to 1990[144]. Inco further claims that levels of impurities and trace elements are usually less stringent for cobalt used in super alloys, than for nickel used in super alloys,

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[140] Inco sold […]* MT of cobalt rounds to customers for super alloy end applications in 2004 and [...]*MT in 2005. [...]* (Inco's response to question 10 of the request for information of 2 March 2006 and [...]*; see inter alia PCC's and Carpenter's responses to the requests for information of 26 January 2006 and 24 March 2006).

[141] Form CO, pp. 127-128.

[142] Response of Inco to the Article 6(1)(c) decision, at paragraphs 97 and 102.

[143] See confidential Annex IV to this decision.

[144] Response of Inco to the Article 6(1)(c) decision, at paragraphs 98 and 105.

as there is a lower proportion of cobalt used in the overall super alloy mixture. Super alloy manufacturers have more flexibility than in the case of nickel[145].

(178) However, the Commission's in-depth investigation has revealed that high purity cobalt is required in all cases for super alloys used in critical applications. As explained above, high purity is not merely a function of the minimum level cobalt of 99.8% but also of meeting strict limits for each impurity. A cobalt product with high cobalt content, but exceeding the limit for one specific impurity (e.g. selenium) could have negative consequences on the physical properties and performance of the super alloy used in critical applications[146] and could create critical failure of the alloy. Such cobalt material would not be acceptable for the super alloy producer and its customers, the jet engine manufacturers.

(179) In its response to the Statement of Objections, Inco claims that the Commission has ignored the fact that lower purity cobalt and/or cobalt with higher levels of trace elements is currently used to manufacture super alloys for safety critical parts.

(180) The Commission has established in its market investigation that manufacturers of super alloys used in safety critical parts require high purity cobalt with strict limits on specific impurities levels that very few suppliers (in particular, Inco and Falconbridge) can meet. This is this market that the Commission has delineated in its market definition and to which the terms "high purity" refer (according to some super alloy manufacturers, this may include lower purity 99.3% cobalt, under strict conditions, provided that the main impurity is nickel or iron and that other impurity levels are met).

(181) **Certification procedure.** Super alloy manufacturers apply a similar certification procedure to select a new cobalt supplier as to select their nickel supplier. Super alloy manufacturers must themselves meet stringent specifications imposed by their own customers on the chemistry of their raw materials, raw material suppliers, melting equipment and procedures. The certification procedure is lengthy and costly as for the certification of high purity nickel products (see recital (139)).

(182) In its response to the Article 6(1)(c) decision, Inco claims that the process of qualification of a new cobalt supplier is similar to that for used for nickel used in super alloys and would normally be completed within 2 months[147]. The Commission's investigation has shown that certification of suppliers for cobalt for super alloys used in safety critical applications is costly for super alloy manufacturers and can last up to five years.

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[145] Response of Inco to the Article 6(1)(c) decision, at paragraph 106.

[146] A market player's response to questions 26 and 27 of the request for information of 31 January 2006.

[147] Response of Inco to the Article 6(1)(c) decision, at paragraph 110.

(183) **Use of secondary cobalt.** Super alloy manufacturers indicate that secondary cobalt cannot be used for the production of super alloys because it does not meet their strict purity requirements. For the same reasons developed above in the nickel section, super alloy customers mostly use prompt and revert, and are subject to the same certification and specifications requirements when using secondary cobalt. Secondary cobalt does not constitute a source of competitive constraint on their purchases of primary high purity cobalt.

(184) In its response to the Statement of Objections, Inco indicates that there are a number of super alloy scrap producers in the U.S. and the EEA that supply super alloy manufacturers with secondary cobalt for use in super alloys used in safety critical parts. The Commission simply notes that this does not mean that secondary cobalt constitutes a source of competitive constraint, as there are technical limits on the amount of secondary cobalt that can be used to produce super alloys, and as secondary cobalt accounts only for 5% of total cobalt supply (for all end applications of cobalt, not only for cobalt used in super alloys for safety critical parts).

(185) **Upgrade of commodity cobalt.** In its response to the Article 6(1)(c) decision, Inco argues that many super alloy producers use vacuum furnaces and other sophisticated furnaces which they could use to upgrade less pure 99.3% cobalt if the price of 99.8% and 99.3% cobalt diverged by a significant amount[148].

(186) However, the Commission's in-depth investigation has shown that super alloy customers need to strictly control the quality of raw materials, in compliance with the strict specifications imposed by their own customers, such as jet engine manufacturers. No customer indicated that it can purchase commodity cobalt products and upgrade them to higher grade products meeting their requirements. PCC indicates that "*because the Company's customers (such as GE, Pratt & Whitney, Rolls-Royce, Siemens, Zimmer and DePuy) have specific raw material quality requirements, upgrading commodity cobalt products is not possible.*"[149] For the same technical reasons as those given for nickel, the VIM process is only one way of controlling impurity levels and is not efficient in removing all types of impurities and/or of removing them economically. Use of VIM technology does not therefore allow super alloy manufacturers to purchase less pure cobalt and refine it further in their production process.

(187) In conclusion, the Commission's in-depth investigation has shown that there is a very specific demand for high purity cobalt – defined by its precise chemical composition and low impurity levels – used for the production of super alloys used in critical applications. Producers of super alloys used in critical applications could not substitute any other cobalt product with a lower quality and/or different chemical composition. In addition, because super alloy manufacturers require approval by their customers of their cobalt supplies, all chemistry specifications, suppliers, equipment and procedure, they have no flexibility to switch to the cobalt products of different cobalt producers.

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[148] Response of Inco to the Article 6(1)(c) decision, at paragraph 112.

[149] Response of Precision Castparts Corporation to question 29 of the request for information of 26 January 2006.

Supply-side substitutability

(188) First, in its response to the Article 6(1)(c) decision, Inco argues that there would be considerable supply-side substitutability as many significant producers make a range of different cobalt products and can supply cobalt products for either metallurgical or chemical applications in a range of different proportions; metallic forms are often produced as direct alternatives to chemical forms (e.g., OMG, Umicore) [150].

(189) The Commission's investigation has however not shown that, as required under the Commission notice on the definition of the relevant market, cobalt producers would be able to switch immediately and without incurring significant costs to start producing (or to increase their production capacity for) metallic forms of cobalt (through electrolytic refining) instead of chemical forms of cobalt.

(190) Secondly, in its response to the Article 6(1)(c) decision, Inco submits that there is a sufficiently large proportion of suitable ores, […]* [151]. Each party only makes one grade of metallic cobalt, which is sold into multiple applications [152]. Most high grade cobalt is produced as a result of the process, and not any particular modifications to an existing process.

(191) However, the Commission's in-depth investigation has confirmed that, as in the case of the production chain for high purity nickel, any supplier trying to produce high purity cobalt suitable for super alloy production would face significant technological and commercial barriers and could not enter without incurring significant costs and time delays. (See below recitals (466) to (468))

(192) For the same reasons developed as regards high purity nickel used in super alloys, cobalt producers face high barriers to be able to produce high purity cobalt suitable for super alloys used in critical applications.

Pricing

(193) There is a difference in LMB prices of 99.3% cobalt and 99.8% cobalt. It is striking to note that the differential between high and low-grade cobalt widened "*as a result of the* announcement *of a strike at Inco's Sudbury operations and production difficulties on the part of two other producers*" in 2003 [153]. The risk of a new strike in June 2006 at Inco's Sudbury operations is also driving up prices of high purity cobalt. According to a recent market report "*high-grade cobalt prices in North America have risen to an average $15.50/lb this month from a cyclical low of $13 in February. Buyers are predicting cobalt at or above $20/lb in the second half of 2006 based on increased*

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[150] Response of Inco to the Article 6(1)(c) decision, at paragraphs 97 and 102.

[151] Response of Inco to the Article 6(1)(c) decision, at paragraph 114.

[152] Response of Inco to the Article 6(1)(c) decision, at paragraph 115.

[153] Information on the website of the Cobalt Development Institute, Cobalt Facts, "Cobalt Supply and Demand" at http://www.thecdi.com/cdi/images/documents/facts/Cobalt_Facts_Supply-Demand_000.pdf

demand from the largest market sector, the makers of superalloys who sell their specialty metals to part makers for gas turbine aircraft engines. However, traders say cobalt could sell for $35 to $50 in the second half if a strike reduces output at Inco's Sudbury nickel mine and smelter in Canada. (...) Traders tell Platt's Metals Week, for example, that if a strike lasts for three months, up to 250 metric tons of high-grade cobalt would be taken out of the market."[154]

(194) This illustrates that there is a specific demand and market for high purity cobalt, which is affected strongly by events affecting the output of the suppliers of the cobalt with the highest purity cobalt such as Inco.

Conclusion

(195) On the basis of the above considerations, it may be concluded that the supply of high purity cobalt for super alloys used in safety critical parts constitutes a separate relevant product market. As for high purity nickel, high purity cobalt is defined by its chemical composition and low levels of impurities (both overall and for each impurity).

Conclusion on relevant product markets

(196) In view of the above, the Commission has assessed the impact of the proposed concentration on effective competition in the nickel and cobalt sectors, in particular in the relevant product markets for:

i. The supply of nickel to the plating and electroforming industry,

ii. The supply of high purity nickel for the production of super alloys/ super alloys used in safety critical parts,

iii. The supply of high purity cobalt for the production of super alloys used in safety critical parts.

Relevant geographic markets

Nickel markets

Geographic market proposed by the parties

(197) The parties submit that the market for the supply of nickel is global in scope. According to the parties, intermediate and finished nickel products are produced and traded across the world and shipped extensively since transport costs represent a relatively small proportion of the final price[155]. As an example, Falconbridge sells globally its finished nickel products from its only refinery located in Nikkelverk, Norway. Furthermore, according to the parties, finished nickel products are sold globally with a reference to

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[154] Article "*Strike fears boost cobalt prices*", Tom Stundza, Executive Editor, 4 April 2006, Reeds Business Information, http://www.purchasing.com/index.asp?layout=articlePrint&artricleID=CA6326343.

[155] The parties estimate that transport costs represented […]* of the average nickel price quoted on the London Metal Exchange (LME) in 2004.

the LME nickel price and average invoiced prices are thus very similar across the world.

Assessment of the Commission

(198) The market investigation has confirmed the parties' approach to a large extent, although it has also revealed some patterns in demand specific to certain areas in the world. In particular, in the plating and electroforming industry, customers preferences and requirements in terms of shape differ between the EEA and North America on the one hand and Asia on the other hand. Some respondents to the market investigation also indicated that premiums over LME prices tend to be higher in Asia due to the strong increase in demand, notably in China. Similarly, the demand for nickel for super alloys is concentrated in the EEA and in North America[156]. On the supply side, while most of the largest nickel suppliers, such as the parties, are active on a global scale, large Asian suppliers tend to focus their business in Asia only. Jinchuan and Sumitomo, two of the largest nickel suppliers globally, have minimal sales in the EEA.

(199) The market investigation however clearly established that supply and demand patterns and thus competitive conditions were largely homogeneous within the EEA and that there were no barriers to trade finished nickel products within the EEA. Thus, the markets for the supply of finished nickel products are clearly at least EEA-wide in scope.

(200) It is not necessary to delineate more precisely the geographic scope of the relevant intermediate and finished nickel product markets for the purposes of the present Decision. Only the geographic scope of the two nickel relevant product markets (supply of nickel for the plating and electroforming industry and the supply of nickel for the super alloys / super alloys used in safety critical parts), where specific competitive concerns have been identified, is further discussed below.

Supply of nickel to the plating and electroforming industry

(201) The parties are of the opinion that the relevant geographic market for nickel as well as any possible narrower market, including nickel used in plating and electroforming applications, is global. They base their views on the fact that nickel for plating and electroforming is sourced from nickel producers globally and supplied in the EEA by producers located outside EEA.[157] In its response to the Statement of Objections, Inco confirms its view on the global dimension of the market for the supply of nickel to the plating and electroforming industry and submits that the arguments brought forward by the Commission are not sufficient to conclude on separate geographic markets.

(202) However, based on the results of the in-depth market investigation, the comments received from Inco in response to the Statement of Objections and for the reasons set forth below, it may be concluded that the geographic scope of the market for the supply

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156 The parties indicate that for all non-ferrous alloys applications, there are already […]* customers at a global level (Form CO, p. 258).

157 Form CO, p.105.

of nickel products to the plating and electroforming industry presents is regional, e.g. the EEA, North America and Asia.

Demand-side analysis: distinct demand characteristics

(203) With respect to demand, the market investigation has established that nickel demand presents different characteristics by continent, based on end users' requirements for specific shapes and sizes and on distribution patterns.

(204) […]*[158] […]*[159], […]*.

(205) Moreover there is not the same demand for high purity nickel products for the plating and electroforming applications in all the regions. While the EEA customers only use the high grade nickel, customers in Asia may be less demanding in terms of nickel purity. […]*[160], […]*[161], it represented only […]*% of its sales in the United States and […]*% in China.

(206) […]*[162].

Transport costs are asymmetric

(207) The Commission also examined the freight rates for transporting nickel for plating and electroforming. According to data provided by the parties[163], it is twice as expensive to import from Asia in Europe ([…]*USD/tonne) than it is to export from Europe to Asia ([…]*USD/tonne). This additional cost is one of the reasons that may explain the absence of imports in Europe of nickel for plating and electroforming from Asia.

(208) […]*[164].

Supply side analysis: suppliers are geographically focussed

(209) Another factor which speaks for a regional definition of the geographic market for the supply of nickel for the plating and electroforming industry is the fact that nickel

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158 Response to question 25 of the request for information of 24 March 2006.

159 Response to the Commission's questions contained within the Commission's e-mail of 19 April 2006 – received on 02 May 2006.

160 Response to the Commission's request for information of 2 March 2006, […]*.

161 As mentioned above, with the carbonyl process, nickel products are produced in the shape of pellets (which may be flattened into discs or flats).

162 Form CO, p. 207.

163 See parties' response to question 25 of Request for information of 24 March 2006.

164 […]*.

suppliers' market positions are very different in the different regions of the world, as reflected by the market shares data provided by the parties.

(210) […]*[165] […]*.

(211) It is particularly remarkable that two main nickel suppliers, Jinchuan[166], the third largest player in nickel for plating and electroforming globally, and Sumitomo[167], the fifth largest supplier, do not sell any nickel for plating and electroforming in the EEA[168].

(212) This situation is not expected to change as the growth in the demand for plating products is […]*[169] […]*, while the parties expect a decline in the EEA and in the United States for the coming years[170]. […]*[171], […]*. In a presentation made in 2005, Jinchuan confirmed the expected increase in demand for nickel in China, and the deficit between supply and demand that they consider should remain in the coming years: "*Nickel Market Balance in China - In 2005, the nickel demand in China is expected to exceed 155,000 tons with expected output of 107,000 tons. By 2010, the demand is forecasted to reach 250,000 tonnes, with an expected output of about 160,000 tonnes".*[172]

(213) […]*. While Falconbridge is […]* of nickel products to the plating and electroforming industry in the EEA, […]*. Inco has a […]* position in North America and has over the last […]* years maintained a market share around [55-65%]*[173]. This is confirmed by the parties themselves in their response to the Article 6(1)(c) decision […]*[174].

(214) With regards to the main competitors of the parties in the EEA, namely OMG and Eramet, it is worth noting that their refineries are both located in Europe. They are both

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165 […]*.

166 During the Commission's investigation, none of the plating and electroforming customers cited Jinchuan as one of its current or potential supplier of nickel products.

167 See response from Sumitomo to request for information received on 9 February 2006.

168 In the Form CO, the parties provided market shares data of their main competitors. While Jinchuan and Sumitomo rank n°5 and 6 respectively on the global market for the supply of nickel, they do not appear at all in the same table for the EEA.

169 […]*.

170 […]*.

171 […]*.

172 See Jinchuan's presentation "Prospects and Opportunities for the Development of Chinese Nickel andCobalt Industry" by Li Yongjun, Chairman of the board & CEO Jinchuan Group Ltd. May 16th, 2005 accessible at the following web address http://www.jnmc.com/publication/meeting/zgngfzqjhjy.pdf

173 […]*

174 Parties' response to the 6(1)c decision, §122.

focusing their sales in the EEA, where Eramet achieved [55%-65%]* of its sales of nickel products to the plating and electroforming industry over the last three years and OMG 70% of its nickel sales[175].

Sales organization and reporting

(215) The parties' own sales organization point towards the existence of regional markets. Inco has one sales office in London covering Europe, the Middle-East and India, three major marketing offices in Asia, one for Japan, one for China and a third for Asian countries other than China and Japan, and one in the USA for the Americas[176]. Falconbridge has a similar organization, with its European sales operations based in Belgium, and other marketing operation in the USA, China and Japan. This organisation is reflected in the parties' internal documents where the plating market is usually assessed on a regional basis and market share positions are given region by region[177].

(216) [...]*[178].

(217) In view of the different market positions of Inco and Falconbridge in Europe and in North America and the resulting different marketing strategies, the Commission considers that they are indicative of the competitive conditions in those two regions differing substantially.

Price levels

(218) The lack of correlation between the premiums for plating customers located in different parts of the world would indicate that demand or supply shocks in one region of the world have no or little impact on prices in other regions of the world. This lack of correlation would suggest the absence of arbitrage between regions, demonstrating the existence of separate geographic market.

(219) Using Inco customer data, the Commission has calculated the weighted average premium for the top 10 plating customers in the EU and assessed how this variable has varied over time and its association with the weighted average premium for the 10 plating customer in the world. […]* Hence Inco faces different type of competitive constraint in Europe and in the rest of the world.

(220) Using Falconbridge data from January 2003 to December 2005, the Commission has calculated the weighted average premium of nickel products for plating for European customers, Asian customer and North American customers for plating nickel products.

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175 Responses to question 17 of the request for information sent on 27 January 2006.

176 See response of Inco to the request for information of 2 March 2006, Inco Limited Marketing organization chart, Tab 26.

177 […]*.

178 [...]*.

[…]*, […]*, Falconbridge faces different types of constraint across the different regions of the world, and is not subject to any form of arbitrage between these regions.

Conclusion

(221) On the basis of the above considerations, it may be concluded that the supply of nickel products to the plating and electroforming industry has a regional geographic dimension, e.g. respectively the EEA, North America and Asia.

Supply of high purity nickel for the production of super alloys / super alloys used in safety critical parts

(222) The Commission's investigation has broadly confirmed that the market for the supply of high purity nickel used in super alloys has a worldwide geographic dimension. Most super alloy manufacturers are located in the United States and in the UK.

Cobalt markets

Geographic market proposed by the parties

(223) The parties submit that the cobalt market is worldwide in scope for the same reasons as for nickel. They also refer to past Commission decisions[179] which indicated that the market(s) for the supply of cobalt might be worldwide in scope.

Assessment of the Commission

(224) The market investigation has confirmed the parties' approach to a large extent, although it has also revealed some patterns in demand specific to certain areas in the world. It has also established that the markets for the supply of finished cobalt products are clearly at least EEA-wide in scope.

(225) It is not necessary to delineate more precisely the geographic scope of the relevant cobalt product markets for the purposes of the present decision. Only the geographic scope of the relevant product market (supply of high purity cobalt for super alloys used in safety critical parts), where specific competitive concerns have been identified, is further discussed below.

Supply of high purity cobalt for the production of super alloys used in safety critical parts

(226) The Commission's investigation has broadly confirmed that the market for the supply of high purity cobalt for super alloys used in safety critical parts is worldwide in scope. Most super alloy manufacturers are located in the United States and in the UK[180].

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[179] Case No COMP/M.3767 BHP/WMC.

[180] Form CO, pp. 182-184.

Conclusion on relevant geographic markets

(227) In view of the above, the Commission has assessed the impact of the proposed concentration on effective competition in the nickel and cobalt sectors, in particular in the relevant markets for:

i. The supply of nickel to the plating and electroforming industry in the EEA;

ii. The supply of high purity nickel for the production of super alloys / super alloys used in safety critical parts globally;

iii. The supply of high purity cobalt for the production of super alloys used in safety critical parts globally.

VI. COMPETITIVE ASSESSMENT

Introduction

Nickel

(228) Inco is the second largest supplier of nickel in the world, while Falconbridge is the fourth largest supplier. The two companies are active in the supply of finished nickel products for a broad range of end applications. Only Inco is active in the sale of nickel specialty products. In 2005, the parties' combined share of primary and secondary nickel supply[181] was [10-20%]* at the global level (Inco [5-15%]* and Falconbridge, [5-10%]*) while their combined share of primary nickel supply was [15-30%]* at the global level (Inco [10-20%]* and Falconbridge [5-10%]*) and [10-25%]* at the EEA level (Inco [0-10%]* and Falconbridge [10-15%]*). The parties' most important competitors in the supply of primary nickel are Norilsk (19% supply share in 2005), BHP Billiton (11%), Jinchuan (7%) and Sumitomo (4%) globally and Norilsk (33%), BHP Billiton (12%) and OMG (8%) in the EEA.

Cobalt

(229) Falconbridge is the second largest producer of finished cobalt products in the world. The parties' combined share of primary cobalt supply[182] was [5-20%]* both at the global level and at the EEA level (Inco [0-10%]* and Falconbridge [5-10%]*) in 2005. At the global level, the largest cobalt supplier is OMG with a share of 15% of global cobalt supply in 2005 followed by various Chinese companies with a combined share of 23% and other suppliers such as Norilsk (9%), Chambishi (7%) and Sherritt/ICCI (6%).

Competition concerns

(230) A large number of respondents to the market investigation expressed serious concerns about the proposed transaction. In certain end applications of nickel and cobalt, where the parties have extremely high combined market shares at the EEA and global level (supply of nickel for the plating and electroforming industry, supply of high purity nickel for super alloys/super alloys used in safety critical parts and supply of high purity cobalt for super alloys used in safety critical parts), the majority of customers are concerned by the proposed transaction as Inco and Falconbridge are considered as the two main suppliers for those markets and as the proposed transaction would significantly strengthen the parties' market power. A number of competitors have also expressed concerns and indicated that the transaction was likely to increase barriers to entry and prices in the end applications mentioned above.

(231) In addition, certain third parties, both competitors and customers, expressed the concern that, given the current tight balance between global supply and demand of nickel and

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[181] As discussed above, the Commission concluded that the supply of nickel does not constitute one single relevant product market, but should be further segmented by end applications.

[182] As discussed above, the Commission concluded that the supply of cobalt does not constitute one single relevant product market, but should be further segmented by end applications.

the expected solid growth in nickel demand, the parties may have the ability and incentive to delay the exploitation of new nickel mines and restrict the increase in global nickel output, thereby leading to stronger nickel prices on the LME and thus in all markets for the supply of intermediate and finished nickel products.

(232) The Commission has carefully assessed the concerns expressed by market players and the arguments put forward by the parties and came to the conclusion that the proposed operation does not appear to be compatible with the common market and with the EEA Agreement with regard to the markets for the supply of nickel to the plating and electroforming industry, for the supply of high purity nickel for super alloys / super alloys used in safety critical parts, and for the supply of high purity cobalt for super alloys used in safety critical parts.

(233) The Commission has carefully assessed claims by certain third parties as regards voluntary delays in New Inco's nickel mining projects, in particular the Koniambo project, and their potential impact on nickel LME prices. The Commission concluded that the New Inco would neither have an economic interest in delaying a mining project at an advanced stage of development (ramp up or committed) on account of the significant financial cost incurred nor to delay an early stage mining project (potential) as the benefits of such announcement, in terms of higher LME prices, are highly speculative and certainly very limited in time.

Supply of nickel to the plating and electroforming industry

Market position of the parties and of their competitors

(234) On the market for the supply of nickel to the plating and electroforming industry, the parties are the main suppliers and have, according to their own figures, a combined market share of [60-80%]* (Inco [20-35%]*, Falconbridge [40-45%]*) in volume at the EEA level in 2005. As a result of the transaction, the HHI[183] would be […]*. After the transaction, the new entity will be by far the largest supplier of nickel products to the plating and electroforming industry, with sales more than five times as high as its closest competitor.

(235) In the EEA, the parties currently face very limited competition from OMG (14%), Eramet (5%) and to a lesser extent Anglo American (2%).

(236) The parties have submitted market shares for the last four years (2002-2005). This data shows that Falconbridge has increased its presence in the EEA (from [25-30%]* in 2002) while Inco's position was rather stable ([20-30%]* in 2002).

The other producers of nickel used by the plating and electroforming industry cannot exercise competitive constraints on New Inco

(237) The parties submit that despite their high market shares, they only account for a third of the total capacity available for the global production of nickel for plating and

[183] HHI stands for Herfindahl-Hirschman Index, a measure of market concentration.

electroforming and indicate that at least ten competitors, […]*, are capable of producing nickel used in plating and electroforming.

(238) In its response to the Statement of Objections, Inco submits revised estimates of the current supply of nickel suitable for plating and electroforming. This shows that the parties' share represented [30-40%]* of the global production in 2005[184]. Furthermore, on the basis of the Commission's finding that only Eramet and OMG are competitors to the parties in the EEA, Inco submits that "the total production of these four undertakings of nickel suitable for plating and electroforming in 2005 was 282,000 MT". The Commission notes that the parties themselves already represent [70-85%]*[185] of this total capacity.

(239) In contrast to Inco's response to the Statement of Objections, responses to the market investigation have shown that the other suppliers cited by the parties do not exercise any real competitive pressure on the parties' sales in the EEA for the reasons detailed below.

(240) During the market investigation, Norilsk confirmed that selling nickel to the plating and electroforming industry is not part of their commercial strategy as they do not "*target this sector*" and that they were only selling small quantities occasionally. Furthermore Norilsk explained in the same response to the Commission's questionnaire[186] that their technology operating at their refineries did not allow them to produce nickel products in round form that could compete with the parties' products.

(241) Both Jinchuan and Sumitomo are selling nickel products to the plating and electroforming industry but are not currently active in the EEA. Jinchuan is a Chinese company whose shareholders include the ShangHaiBaoSteel Group Corp. and TaiYuan Iron and Steel[187] (Group) Co., Ltd two major stainless steel makers. Jinchuan is mainly selling its nickel production to stainless steel producers (48%) and to a lesser extent to the plating industry (26%)[188]. As described in the geographic market definition section of this statement of objection, there is little incentive for Jinchuan to export as internal demand is not even matched by the supply and the transport costs do not favour the Asian exporters.

(242) In its response to the Commission's investigation[189], Sumitomo confirmed that it sells most of its production in Japan and has never exported to the EEA. As discussed in

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184 Inco submits that the current supply of nickel for plating and electroforming is estimated at 586,025 MT (CRU Nickel Quarterly, January 2006) and the parties' supply is […]*.

185 CRU Nickel Quarterly, January 2006.

186 See response to question 29 of the request for information received on 8 February 2006.

187 Each holding a 8.11% share of Jinchuan's capital.

188 See Jinchuan's presentation "Prospects and Opportunities for the Development of Chinese Nickel andCobalt Industry" by Li Yongjun，Chairman of the board & CEO Jinchuan Group Ltd., 16 May 2005, accessible at the following web address http://www.jnmc.com/publication/meeting/zgngfzqjhjy.pdf

189 See response to questions 17.49, and 52 of the request for information received on 9 February 2006.

recital (211), it seems unlikely that this will change in the near future in view of the increase in demand in Asia. Furthermore, Sumitomo is a shareholder of three companies controlled by Inco, namely PT Inco, which has mining and processing operations in Indonesia, Inco Tokyo Nickel Limited which is active in nickel refining in Japan and in the Goro project, a mining greenfield project in New Caledonia. These links limit the incentive of Sumitomo to compete actively with Inco on the nickel markets.

(243) Tocantins is active in the market for the supply of nickel products to the plating and electroforming industry and owns a refinery in Brazil with a capacity of 19,700 MT/year. They supply the plating and electroforming industry with nickel coins, cut cathodes and full plate cathodes with a nickel content of a minimum 99.9%. However most of its production is sold to the stainless steel industry and either in South America or to Asia. […]*[190]. This was broadly confirmed by Tocantins in their response to the Commission's investigation[191]. Therefore Tocantins constitutes only a limited and potential competitive constraint on the market for the supply of nickel products to the plating and electroforming industry in the EEA.

(244) As regards Anglo American, they explained in their response to the Commission's investigation[192] that they are "*a platinum producer. We produce nickel as a by-product of our platinum mining. We do not manufacture certain nickel finished products due to our focus on platinum mining and the fact that nickel production is not our core business. We simply sell our nickel as full plate cathode and supply stainless steel producers, the largest market sector*". Anglo American submits that the only product they sell in nickel is full plate cathode and that they are not selling in the EEA. Furthermore the capacity of their refinery (22,700 MT/year)[193] is small compared to the parties' capacity and the demand of the plating market (130,000 MT/year). Therefore Anglo American does not appear to have either the capacity or the incentive to expand its sales to the plating market, as they have a limited availability in terms of quality and quantity of nickel products.

(245) As regards BHP Billiton, while it is one of the main actors in the nickel market it remains absent on the market for the supply of nickel to the plating and electroforming industry. During the Commission's investigation, BHP Billiton, confirmed that "*it does not produce the suitable products for this application. It thus has no capacity for such products[194]*".

(246) Eramet is active in the plating market and produces full plate cathodes that are cut in strips and cathodes of 4"x4" and 2"x2" which are of suitable high purity to be used by the plating and electroforming industry. However they do not compete against the

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190 […]*.

191 Tocantin's response to the request for information received on 4 May 2006.

192 See response to the request for information received on 13 February 2006.

193 See Form CO, Table 5, p. 43.

194 See response received from BHP Billiton by e-mail on 4 May 2006.

parties with a comparable range of nickel products. Indeed, they do not produce nickel products in round forms (rounds and crowns) and have no plan to enter this segment as they consider that it would not be profitable to invest in adapting their production process[195].

(247) Furthermore Eramet, with its current resources, is capacity-constrained and, in relation to the super alloys market, is not able to exert a significant competitive constraint. As explained in the super alloys section of this Decision, Eramet's nickel production capacity for high purity electrolytic nickel is 13,000 MT per year. In addition, Eramet's cash costs are among the highest in the nickel industry, and certainly higher than that of Inco or Falconbridge[196]. For instance, Brook Hunt 2005 charts comparing estimated costs for nickel refineries as of 11 October 2005[197] show that Eramet's Sandouville SLN refinery has the highest costs of all nickel refineries, with unit costs of approximately USD 0.60/lb (compared with approximately USD 0.20/lb for Sumitomo, USD 0.32/lb for Falconbridge Nikkelverk and Inco Thompson and USD 0.47-0.48/lb for Inco Copper Cliff).

(248) Even if this limited production capacity was totally sold into the plating market, (although Eramet also supplies the super alloys market), Eramet would not have the ability to compete with the parties whose refining capacity is 234,000 MT per year[198]. Therefore, Eramet, while being among the few nickel suppliers to the plating and electroforming industry in the EEA, competes only to a limited extent with the parties as it does not have the capacity to supply the same range and quantity of nickel products.

(249) The responses to the market investigation received from the distributors and customers active in plating and electroforming in Europe have confirmed that so far OMG has been viewed as the only real alternative supplier to Inco and Falconbridge. However, recent changes in OMG's strategy have considerably reduced the competitive constraint which OMG could exercise on the EEA market for the supply of nickel for the plating and electroforming industry.

(250) After having suffered high operating costs because of the under-utilisation of its refinery for lack of feed, OMG entered into a toll refining agreement with Inco on 31 January 2006. This agreement concerns the refining of 21,500 to 25,000 MT of contained nickel out of its 60,000 MT refining capacity and will deliver to Inco […]* MT of cathodes per contract year. This toll refining contract is concomitant to a toll

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195 See response to question 29 in the response to the request for information received on the 13 February 2006.

196 […]*.

197 [...]*.

198 See Form CO, Table 5, p. 43.

smelting agreement signed by the same parties and Boliden[199] for the smelting of Inco nickel concentrate[200].

(251) As reported by CRU[201], despite the buoyant demand for nickel, OMG had to restrict its nickel refining activities in 2005 due to lack of feed: *"Amongst the more significant reductions in output in 2005 was the fall in OM Group's nickel production. The company has always been dependent on securing its fee requirements from third parties in order to fill its 55,000tpy refinery at Harjavalta. The termination of OM Group's contract with Nickel West (now part of BHP Billiton) for 14,000tpy of nickel-in-concentrate in the first quarter of 2005 left a severe gap in the company's feed supplies. Unable to replace this tonnage from other sources, OM Group's production of refined nickel also suffered. We estimate that the company produced 38,500 tonnes in 2005, significantly below capacity levels"*.

(252) [...]*.

(253) Therefore, as from 2006, OMG will partially stop supplying the market since a major part of its production of nickel cathodes[202] will be marketed by Inco. Furthermore this toll agreement will not only reduce the capacity of OMG to sell nickel to the plating and electroforming market but also creates a link between OMG and New Inco […]*[203] […]*.

(254) During the Commission's investigation, some customers have indicated that OMG has already announced that it would no longer be in a position to supply them with nickel products. […]*[204]: […]*.

(255) Finally, even before that, OMG was not competing with Inco and Falconbridge to the same extent, as it was not producing the whole range of nickel products used in plating and electroforming but only cathodes, in uncut full plates, cut squares or strips. In response to the Commission's investigation, OMG has confirmed that they do not produce rounds or crowns and have no plans to enter this segment[205].

(256) During the Commission's market investigation, the plating and electroforming customers have contradicted the parties' submission that the purchase of nickel products on the LME was an alternative for plating and electroforming customers. In fact, only

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199 OMG does not own a smelter and utilizes the smelter of a third party, Boliden, in Finland.

200 See Inco's response to question 9 to the request for information of 24 March 2006.

201 CRU Nickel Quarterly – January 2006 – Page 19.

202 The quantity of […]* MT agreed in the Toll Refining Agreement between Inco and OMG has to be compared to the total sales of Nickel cathodes by OMG in 2005 which amounted to […]* MT.

203 Inco's response to Commission's Request for information of 2.03.2006, "2006 plan update presentations January 11, 2006".

204 […]*.

205 Source: OMG's reply to request for information of 23 March 2006.

nickel of specific grade (less than or equal to 99.8% purity) and of specific shapes (full plate cathodes and cut cathodes) can be acquired via the LME. Therefore, as discussed in recitals (70) to (93), the nickel available on the LME would not fulfil all the needs of the plating and electroforming customers. This was confirmed during the market investigation where those customers explained that they used the LME as a risk management tool rather than for physical deliveries.

(257) The parties have not brought further evidence in support of their submission with regard to the possible purchase of nickel for plating and electroforming applications on the LME. […]* cannot be considered as a possible alternative for the plating and electroforming customers and does not represent a competitive constraint on that market.

(258) It follows from the above that the parties' competitors on the market for the supply of nickel products to the plating and electroforming industry in the EEA are in fact limited to two competitors, Eramet and OMG. For the reasons detailed above, these competitors are, however, able to exercise only very limited competitive constraints on the parties.

Inco and Falconbridge are the two main suppliers and are the two closest competitors for the supply of nickel used by the plating and electroforming industry

Rivalry between the two companies is a common theme in documents from the two companies

(259) […]*[206]. [...]*[207]. […]*.

(260) [...]*[208].

The companies are the only ones to have developed a product portfolio dedicated to the plating and electroforming industry

(261) During the in-depth market investigation, most customers expressed concerns about the transaction and mentioned that the new entity will be by far the largest supplier with the greatest range of nickel products for plating and electroforming (different shapes and sizes). The parties are the only suppliers to the plating and electroforming industry in the EEA that have developed and marketed nickel products specifically intended for these applications (crowns and rounds) with benefits to customers in terms of handling in their production process and product quality.

(262) As the parties acknowledge[209], Inco has developed, as part of its marketing strategy, specific products for the plating and electroforming applications, the rounds and pellets. […]*[210], […]*.[…]*[211] [212].

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[206] [...]*.

[207] [...]*.

[208] [...]*.

(263) Furthermore Inco submits, in response to a request for information[213], that it has developed an additional plating product, the "chips", with specific advantages such as […]*[214] […]*.

(264) […]*.

(265) The Commission has prepared, on the basis of the results of its market investigation, a similar table with the portfolio of the nickel suppliers active in the EEA. This table shows that the planned merger will bring together the two suppliers which before the transaction already enjoyed the greatest product range. After the transaction, New Inco will be the only actor on the market able to supply the full range of products.

Producer	Ni Squares	Strip	Rounds	S-Nickel	Pellets	Chemicals
Falconbridge						
Inco						
New Inco						
OMG						
Eramet						

(266) […]*[215].

The parties have also developed brands that are well known in the plating and electroforming industry.

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[209] Inco's response (on 12 April 2006) to question 17 of request for information of 31 March 2006.

[210] [...]*.

[211] [...]*.

[212] [...]*.

[213] Inco's response to question 29, of request for information of 24 March 2006.

[214] [...]*.

[215] [...]*, response to question 19 of the request for information of 24 March 2006.

(267) In their response to the Article 6(1)(c) decision, the parties recognize the existence of branded nickel products used in the plating and electroforming industry; however they submit that the importance of brands varies according to the type of nickel products. For example the parties state that cut cathodes would not be sold as a branded product.

(268) The Commission does not agree with the parties' views that the importance of the brands for nickel used in the plating and electroforming is limited to specific products as it has found evidence of the key role of the brands in the parties' own internal documents. […]*[216] […]*[217].

(269) The Commission asked distributors whether there are any "must have" brands for the nickel used in the plating and electroforming industry. The outcome of this survey was that, with rare exceptions, Inco and Falconbridge were named by all the distributors as the only"must have" brands. No other supplier's brand was ever cited by any distributor.

Ability and incentive of the parties to raise prices on the market for the supply of nickel to the plating and electroforming industry

Customers have limited possibilities of switching supplier

(270) New Inco will be an indispensable supplier for most distributors. It will represent an overwhelming proportion of the nickel products available for plating and electroforming applications. New Inco will offer under two distinct brands an unrivalled array of nickel products, combining all the possible forms with the highest purity. Therefore New Inco will benefit from an enhanced position vis-à-vis its customers.

(271) Furthermore, distributors might not have the incentive to resist to any price increase by New Inco. First, it is likely that they would all be faced with a similar increase in prices. Second, as explained earlier, distributors must get access to Inco's and Falconbridge's offerings if they wish to propose a full range of products suitable to meet plating and electroforming demand. Challenging a price increase would risk losing significant sales to other distributors who might not have opposed the increase. Thirdly, a price increase would not necessarily put distributors' margins in jeopardy. The distributors usually calculate their sales price to the end customers by adding a margin to the price paid to the nickel supplier (LME + premium). This margin covers their own sales costs and their profit. Data collected by the Commission during its investigation shows that the distributor usually calculates its sales price using one of the two following formula: the distributors either have a fixed margin (in EUR/MT) that is added to their purchase prices or they add a percentage calculated on their purchase's price. If there were to be a price increase, distributors could simply transfer all or part of this increase to the end customers without losing on their margins per tons sold as distributors are not able to resist a price increase or to absorb it.

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216 […]*.

217 […]*.

(272) […]*[218]: […]*.

(273) As regards end users, the ability to switch to alternative suppliers would be reduced on account of their requirements in terms of purity and shape of the nickel products. Inco and Falconbridge are the only nickel producers with a product offering specifically targeting the plating and electroforming end applications. With respect to the shape, the market investigation has, for instance, shown that certain customers require round shapes for their production process. While customers have not been able to quantify the exact investment that would be required to adapt equipment to a different nickel product shape, they all confirm that it would necessitate a costly investment[219].

(274) In particular, the end customers, namely the customers of the nickel distributors who are active in plating, have confirmed during the in-depth investigation that they would be reluctant to adapt their production process to a change of nickel product as this would involve large investment, which would not be profitable in a context of strong competition from plating companies from outside Europe.

(275) As regards the substitutability of nickel used in plating and electroforming, the parties estimate in their internal documents that approximately 10% of the plating demand would migrate to other products should nickel prices remain at high levels. This leaves ample scope for the parties to increase margins and prices without a decrease in volumes defeating the increase in prices. Moreover the Commission's investigation shows that nickel can not be replaced by any other metal in the plating and electroforming industry and therefore plating and electroforming customers would not be able to switch.

(276) […]*[220], […]*

High barriers to entry will hinder potential competitors from entering the market

(277) The parties submit that other nickel producers would have an incentive to enter this market in the event of a price rise. Furthermore, in its response to the Statement of Objections, Inco claims that there are no high barriers to entry into the plating and electroforming industry: that is the case as regards the setting up or maintaining of a distribution network and the conversion of cut cathode production to the production of rounds/crowns, despite the existence of strong brands.

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218 […]*.

219 Plating and electroforming customers' responses to question 21 of Commission's request for information sent on 27 January 2006.

220 […]*.

(278) The Commission does not agree with this assessment and has found evidence that high barriers to entry limit the possible entry or development of competitors on the market for the supply of nickel for the plating and electroforming industry.

(279) […]*[221]: […]*.

(280) Information submitted by the parties on Inco's global average premiums between […]* and […]*[222] and on the nickel producers' market positions, shows that it has […]*.

(281) The parties have not produced any evidence for the entry or expansion of any new competitor in plating and electroforming in the past years. In an Inco internal document[223], data on the parties' and competitors' market shares do not show the entry or increase in the market share of any new supplier, and the main actors present in 1998 (Inco with a [30-50%]* global market share; Falconbridge, [10-20%]*; Jinchuan, [10-20%]* and OMG, [0-10%]*) were still active in 2004 with equivalent market shares. This lack of past and potential entry has been confirmed by the responses to the market investigation, where customers did not mention any new recent entrant or potential new entrant. Similarly, competitors did not submit any information on any planned change in their strategy to enter or develop their sales in that market.

(282) Therefore, following the transaction, New Inco, combining the two leading suppliers of the market for the supply of nickel for the plating and electroforming industry, will be able to increase prices, since its competitors are unlikely to increase supply. This conclusion is further reinforced by the fact that the parties have among the lowest production costs in the industry.

(283) As stated by Inco in a presentation issued when the merger was annnounced "*Even before realizing synergies from the transaction, we expect the new Inco's nickel and copper cash production costs per pound to be in the lower half of the Brook Hunt cost curve*"[224].

(284) New Inco will also inherit all the competitive advantages of its parent companies, in particular the reputation of their brands, the depth of their product ranges and the quality of their relations with distributors. All these factors would serve to reinforce further the loyalty of distributors, making New Inco indispensable to them in this market, and would constitute obstacles to the development of competing suppliers and to the entry of new suppliers.

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[221] […]*.

[222] Form CO, table 65, p.191.

[223] […]*.

[224] "Inco Limited Speakers" Notes - Inco Offers to Acquire Falconbridge - Conference Call -October 11, 2005".

(285) Privileged contacts with distributors, brand recognition and ability to price discriminate against the smaller range of products of any new entrant or active competitor will give the parties the ability to discipline both actual and potential competitors.

Conclusion on the ability and incentive of New Inco to raise prices

(286) As demonstrated above, Inco and Falconbridge are the main suppliers competing on the market for the supply of nickel to the plating and electroforming industry in the EEA, where they face only limited competition from Eramet and OMG. Post-transaction, New Inco will become the sole supplier capable of offering a unique range of products to the plating and electroforming industry. For the reasons explained above, customers will not be able to find sufficient supply of nickel products from alternative suppliers, who furthermore could not cover all their needs with the suitable products.

(287) Following the transaction, New Inco would therefore have the power to increase unilaterally prices for nickel products supplied to the plating and electroforming industry, while facing limited competitive pressure from any other existing or potential suppliers of nickel products to the plating and electroforming industry. In addition, the proposed transaction could prejudice the security of supply of plating and electroforming nickel customers in the event of strikes at New Inco.

Conclusion

(288) For the reasons set out above, the Commission therefore considers that the proposed operation is likely to significantly impede effective competition, in particular as a result of the creation of a dominant position, as the parties would have the ability and incentive to raise prices on the market for the supply of nickel to the plating and electroforming industry in the EEA. The notified operation therefore does not appear to be compatible with the common market and with the EEA Agreement.

Supply of high purity nickel for the production of super alloys / super alloys used in safety critical parts

(289) The New Inco will become by far the largest and almost monopolist supplier of high purity nickel used in super alloys. According to the Commission's estimates, New Inco will have a market share of [75-100%]* on the global market for the supply of nickel for super alloys. The position of New Inco will be very strong as very few nickel suppliers produce high purity nickel meeting the very strict specification of super alloy manufacturers and they all face serious capacity constraints. No other nickel supplier is or will be able to match the unique strengths of New Inco in terms of product quality, production capacity and reputation on the market for the supply of high purity nickel used in super alloys. The very few other companies which produce high purity nickel will not be able to exercise any significant competitive constraint on the parties. Given the significance of barriers to entry, constraints on the future behaviour of New Inco by potential competition are likely to be minimal. As a result of the merger, New Inco will be able to increase unilaterally prices for high purity nickel. This is particularly so in a context where the demand for high purity nickel is strongly increasing and high purity nickel supply is extremely tight.

(290) In its response to the Statement of Objections, Inco claims that there is widespread confusion in the Statement of Objections between the supply of nickel for super alloys and the supply of nickel for super alloys for use in safety critical parts. According to Inco, different nickel producers and customers have varying definitions for these terms, and in many cases, market test participants were actually referring to super alloys for use in safety critical parts, or to the general category of non-ferrous alloys (or high nickel alloys). Inco claims that this has led the Commission to overstate its share of the supply of nickel for super alloys and for super alloys for safety critical parts.

(291) The Commission notes that super alloy manufacturers each manufacture different types of super alloys with different end applications, more or less demanding, and have varying specifications for their nickel needs. It remains true that for many super alloys (and not only for the super alloys used in safety critical parts contrary to what Inco claims), super alloy manufacturers require high purity nickel with specifications which are much stricter than LME grade nickel and which very few suppliers (in particular, Inco, Falconbridge and Eramet) can meet. It is this market that the Commission has delineated in its market definition and to which the terms "high purity" refer. The precise delineation between super alloys and super alloys for use in safety critical parts does not appear crucial in this respect.

(292) It is worth noting that Inco acknowledges in its response to the Statement of Objections that the parties could be said to enjoy a high share in relation to the supply of nickel for super alloys for safety critical parts. Inco however claims that this market segment is very small and that within that segment New Inco will remain subject to strong competitive constraints.

Competition on the market for the supply of high purity nickel used in super alloys is driven by the rivalry between Inco and Falconbridge

(293) The Commission's in-depth investigation has confirmed that there are very few producers of high purity nickel meeting the strict specifications of super alloy manufacturers: Inco, Falconbridge, and Eramet.

(294) In its response to the Article 6(1)(c) decision, Inco claims that, not only Eramet but also Norilsk, Jinchuan, OMG, Bindura, and Sumitomo all produce products of a suitable quality for super alloys. Inco believes that Jinchuan was recently qualified by Howmet and by CAPI for safety critical parts[225]. One of Inco's super alloy customers would also have purchased nickel for super alloys used in safety critical parts from at least seven suppliers ([…]*), and would have used nickel from […]* for super alloys. Inco claims that despite its relatively small production capacity, Eramet could satisfy the entire demand for nickel for super alloys used in safety critical parts. According to Inco, other producers such as OMG, Bindura, Empress, Jinchuan, Tocantins and Sumitomo could also supply sufficient nickel of suitable quality to satisfy the entire demand for nickel for super alloys used in safety critical parts[226].

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225 Response of Inco to the Article 6(1)(c) decision, at paragraph 72.

226 Response of Inco to the Article 6(1)(c) decision, at paragraphs 141 and 143.

(295) This alleged multiplicity of suppliers to the high purity market is not, however, confirmed by the Commission's investigation. First, Inco and Falconbridge are supplying an overwhelming part of the market and only a few other producers are able to produce high purity nickel. Second, the current smaller high purity nickel producers and other nickel producers currently exercise very limited competitive constraints on Inco and Falconbridge.

Inco and Falconbridge are the two main suppliers of high purity nickel used in super alloys

(296) Inco and Falconbridge internal documents are indicative of their overall strength on the market.

Few alternative suppliers

(297) First of all, there is ample evidence from the parties' […]*.

(298) […]*[227] […]*[228].

(299) […]*.

(300) Similarly, Falconbridge produced a chart showing that three of Falconbridge's nickel finished products have by far the lowest total impurities content (ppm measurement for 22 different impurities)[229]. At the oral hearing and in a subsequent submission, Falconbridge claimed that for the purpose of determining whether nickel products are suitable or not for use in the production of super alloys for safety critical parts, cobalt and iron are not an impurity as it is required for the production of super alloys for safety critical parts[230]. Falconbridge thus submits corrected purity graphs showing that in 2006 the only two specifications with levels of deleterious impurities higher than the reference level of 200 ppm (i.e. a nickel + cobalt + iron content of at least 99.98%) are those of Bindura and Empress.

(301) The Commission first notes that super alloy manufacturers' nickel product specifications still contain a maximum limit on cobalt and iron content of nickel (of as low as 10 ppm, and generally 100 ppm), which some of the suppliers' specifications do not meet. The Commission therefore considers that it is wrong to adjust the purity graph as suggested by Falconbridge. In addition, the Commission's investigation has clearly shown that the content in each impurity and not the total impurity content is relevant to determine the suitability of finished nickel products for super alloy production (i.e., there is not only a requirement of a minimum nickel content of 99.98% but also specific maximum limits for each impurity).

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[227] […]*.

[228] […]*.

[229] […]*.

[230] Falconbridge letter of 9 June 2006 to the European Commission.

(302) [...]*[231].

(303) [...]*[232].

Inco and Falconbridge view themselves as the main players

(304) [...]*.[...]*[233].

(305) [...]* [234] [235] [236] [237] [238] [239] [240] [241].

(306) [...]*[242] [...]*[243] [...]*[244] [...]* [245].

(307) [...]*[246] [247].

New Inco will have a market share of about 90% on the market for the supply of high purity nickel used in super alloys

(308) In the Form CO, Inco estimated that the volume of nickel used in super alloys globally is no less than [5-40,000]* MT, but indicated that it was unable to estimate the total

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[231] [...]*.

[232] [...]*.

[233] [...]*.

[234] [...]*.

[235] [...]*.

[236] [...]*.

[237] [...]*.

[238] [...]*.

[239] [...]*.

[240] [...]*.

[241] […]*.

[242] […]*.

[243] […]*.

[244] […]*.

[245] […]*

246 […]*.

247 […]*.

volume of nickel used in super alloys for safety critical parts, as super alloys are used in a large number of different components, only some of which would be classified as safety critical parts[248]. The parties later estimated that the market for high purity nickel used in super alloys for safety critical parts amounts to [5-40,000]* MT[249], but were unable to provide market share estimates as they claim that they cannot identify precisely the share of their sales intended for these applications.

(309) Market shares could be calculated in three alternative ways. First, it is possible to assess market shares based on the parties' share of super alloy customers' purchases of high purity nickel for use in super alloys (demand side). Second, it is also possible to aggregate the volumes of high purity nickel sold by all the producers of high purity nickel to super alloy customers for super alloy end applications (supply side). Thirdly, comparison of the production capacity for high purity nickel suitable for use in super alloys of the combined entity to that of its competitors shows that the combined entity will have a very strong and almost monopolist position.

Supply-side estimates of market shares

(310) Inco sold [5-40,000]* MT of high purity pellets to customers for super alloy end applications in 2004 and [5-40,000]* MT in 2005[250]. According to Inco, the supply of pellets represents a […]* proportion ([…]* %) of its sales to super alloy manufacturers, which means that taking into account only Inco's pellet sales may understate Inco's market position[251]. Falconbridge sold [20-40,000]* MT of high purity cathodes in 2004 and [20-40,000]* MT in 2005[252]. Eramet sold [0-5000]* MT of high purity cathodes to super alloy manufacturers in 2004 and [0-5000]* MT in 2005 (although some of these volumes may have been used for other applications than super alloys). The market for high purity nickel sold for super alloys thus represented approximately [60,000-80,000]* MT in 2004 and [60,000-80,000]* MT in 2005, and the parties had a combined market share of […]* % in 2004 and […]* % in 2005.

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248 Form CO, p. 163.

249 Presentation to the European Commission, "Competitive Effects Analysis", 14 February 2006, p. 15.

250 […]* Source : Inco's response to question 2 of the request for information of 24 March 2006 […]*.

251 Inco's response to question 33 of the request for information of 24 March 2006.

252 To estimate Falconbridge's global sales to super alloy customers for use in the production of super alloy, the Commission proceeded as follows. […]*.

	2004		2005	
Inco	[20-40,000]*	[40-50%]*	[20-40,000]*	[40-50%]*
Falconbridge	[20-40,000]*	[40-50%]*	[20-40,000]*	[40-50%]*
New Inco	[50-70,000]*	[90-100%]*	[50-70,000]*	[90-100%]*
Eramet	[0-5000]*	[0-10%]*	[0-5000]*	[0-10%]*
TOTAL	**[60,000-80,0000]***	**100%**	**[60,000-80,0000]***	**100%**

(311) Under the most conservative approach possible, where Norilsk's sales of nickel for the production of super alloys would account for around 5,000 MT[253] and where it is assumed that Sumitomo would sell as much as [6,000-8,000]* MT[254] of nickel for the production of super alloys, the size of the market would be around 80,000 MT in 2005 and the parties would have a market share of [70-85]* %. As discussed above, it should be noted that no other supplier of nickel produces finished nickel products suitable for the production of super alloys and both Norilsk and Sumitomo are believed to have much lower sales (if any) than these estimates:

Norilsk[255]: "*The vast majority of Norilsk Nickel's nickel production is cathode nickel. To our best knowledge, this particular product is not suitable for super alloy industry because of its size and insufficient purity".*

Sumitomo[256]: *"We don't know the exact quantity that is used for super alloy but we think the quantity is very small".*

	2004		2005	
Inco	[20-40,000]*	[30-40%]*	[20-40,000]*	[30-40%]*
Falconbridge	[20-40,000]*	[30-40%]*	[20-40,000]*	[40-50%]*

253 […]*.

254 Sumitomo sold [20,000-40,000]* MT of finished nickel products for melting applications (except stainless steel) in 2005. (Source: Sumitomo's response to the request for information of 27 January 2006). The Commission estimated Sumitomo's sales of nickel for the production of super alloys under the assumption than the share of Sumitomo's sales of nickel for the production of super alloys within Sumitomo's sales of nickel for melting application (except stainless steel) was equal to the share of the sales of nickel for the production of super alloys within sales of nickel for melting application (except stainless steel) (figure provided in Form CO, p. 157) at the global level.

255 Norilsk's response to the request for information of 23 March 2006.

256 Sumitomo's response to the request for information of 23 March 2006.

New Inco	[50-70,000]*	[70-80%]*	[50-70,000]*	[70-80%]*
Eramet	[0-5,000]*	[0-10%]*	[0-5,000]*	[0-10%]*
Norilsk	5,000	[0-10%]*	5,000	[0-10%]*
Sumitomo	[6,000-8,000]*	[10-20%]*	[6,000-8,000]*	[10-20%]*
TOTAL	**[60,000-80,000]***	**100%**	**[80,000-100,000]***	**100%**

(312) In its response to the Statement of Objections, Inco claims that the Commission over-estimated the size of the market segment in which high purity nickel products are required. According to Inco, only certain super alloys (namely super alloys for safety critical parts) require nickel of the highest level of purity. Inco refers to a submission commissioned from an expert with over 35 years of experience in the super alloys industry that estimates the global market for super alloys for safety-critical parts to be no more than [5-40,000]* MT per year.

(313) As indicated above, the Commission has defined a market for high purity nickel with stricter specifications than LME grade nickel (and often stricter specifications than the ISO standard 6283 NR9995) which only a few producers are able to meet. Such high purity nickel is not required only for the production of super alloys used in safety critical parts such as rotating jet turbine blades but also for the production of other super alloys.

(314) While it is difficult to give a precise estimate of the size of the global market for the supply of nickel for super alloys, the Commission's estimates are based on confidential information provided by the parties and their competitors' sales of high purity nickel to super alloys producers (complemented by information provided by the main super alloy producers on their high purity nickel purchases). The expert report to which the parties refer only estimates the size of a market for sales of nickel for super alloys used in safety critical parts (and not for high purity nickel for super alloys), based on world nickel alloy shipments (and estimates as to the nickel content of super alloys) rather than on nickel consumption of super alloys. In addition, it is worth noting that even for super alloys that are not used in safety critical parts, super alloy manufacturers may require some quantities of high purity nickel (see for example CAPI's comment that "*the data is for Kgs of alloy produced, not Kgs of nickel consumed. Also please note that the some grades of nickel, while meeting the LME acceptance specification, would not be completely suitable for wholesale substitution into the automotive alloys. Our technical staff is of the opinion that certain non-aerospace quality nickel could be used in the automotive alloys only when blended with aerospace quality nickel. The OMG briquettes, for example, contain levels of deleterious tramp elements which are too high to use the nickel at 100% substitution. The OMG nickel could be substituted for 40% to 50% of the aerospace quality nickel currently used to make the automotive alloys*[257]).

[257] CAPI's e-mail to the Commission of 19 April 2006.

Capacity-based calculation of market shares

(315) The Commission estimated the capacity-based market shares of the parties in 2005 on the basis of Annex I, which contains the specification of the finished nickel products produced by each of the main nickel suppliers, and the production capacity of each of the nickel suppliers producing finished nickel products potentially suitable for the production of super alloys (based on data from the parties). The Commission adopted a conservative approach and included the capacities of Norilsk and Sumitomo for the production of high purity nickel, despite the fact that these companies are only marginally (if at all) active in the supply of nickel to super alloy producers.

	2004 (in MT)	
Inco	[50,000-150,000]*	[40-50]*%
Falconbridge	[50,000-150,000]*	[35-45]*%
New Inco	[100,000-300,000]*	[75-95]*%
Eramet	13,000	5%
Norilsk	5,000	2%
Sumitomo	40,000	15%
TOTAL	[150,000-350,000]*MT	**100%**

(316) The global production capacity for high purity nickel thus represents approximately [150,000-350,000]* MT, and the parties have a combined capacity share of [80-100]*%. Annex III provides further details on the capacity share of the parties depending on the level of impurities in the finished nickel produced.

(317) The market share and capacity estimates are confirmed by views of customers on the market positions of Inco and Falconbridge. For instance, a market player estimates that the size of the market for high purity nickel used in super alloys amounted to 150,000-170,000 MT in 2004 and expanded to 165,000-190,000 MT in 2005 due to an upturn in the aerospace sector[258].

(318) PCC estimates that New Inco would control 70-80% of the high purity nickel market[259].

[259] PCC's response to question 53 of the request for information of 26 January 2006.

(319) […]*.This is confirmed by estimated shares of sales in excess of 90%.

(320) The Commission notes that the parties did not comment specifically on the Commission's calculation of capacity-based market shares in their response to the Statement of Objections. Inco simply contends that Eramet produces enough nickel of the highest purity to satisfy the entire global requirements for nickel for super alloys for safety critical parts applications, and that Norilsk supplied nickel for super alloys for the Russian domestic market for aircraft engines prior to the fall of the Soviet Union and has such a production level as to be able to supply a substantial part of the nickel for many of the super alloys for safety critical parts applications worldwide.

(321) The Commission notes that Eramet's production would be insufficient to meet the demand even assuming the size of the market is 15,000 MT (see below). In addition, the fall of the Soviet Union dates back more than 15 years, and the parties themselves indicated in the Form CO that Norilsk has not produced the HO nickel quality, the specific nickel quality on which the Russian defence industry was based in the last 15 years.

The current smaller high purity nickel producers and other nickel producers exercise very limited competitive constraints on Inco and Falconbridge

According to super alloy manufacturers there are no credible alternatives to Inco and Falconbridge to meet their demand

(322) Super alloys manufacturers indicate that there are no credible alternatives to Inco and Falconbridge for high purity nickel used in some super alloys, for which customers have very demanding technical requirements, except the French company Eramet and to a lesser extent Norilsk[260]. Norilsk, however, has lower quality nickel products (see below)[261]. All super alloy manufacturers have certified Inco, Falconbridge and Eramet as suppliers of high purity nickel suitable for super alloy production[262], and they all purchase most of their requirements for high purity nickel from Inco and/or Falconbridge[263].

(323) The Commission's investigation has also shown that super alloy manufacturers do not generally find the nickel products of the alternative producers mentioned by the parties acceptable for use in super alloys.

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[260] PCC, Special Metals and Carpenter also indicate that they have certified Norilsk (see response of PCC, Special Metals, Carpenter to question 12(a) of the request for information of 20 March 2006).

[261] See, for example, Special Metals' response to question 13 of the request for information of 2006.

[262] See responses to question 12 (a) of the request for information to super alloy customers of 20 March 2006..

[263] CAPI purchases most of its nickel from Inco, and only small volumes from Falconbridge and Eramet. During the period 2002-2004, PCC purchased approximately [90-100%]* of its high purity nickel requirements from Inco and Falconbridge. The remaining [0-10%]* was purchased from Glencore, a metals trader, and was produced by Eramet. Special Metals purchases most of its high purity nickel requirements from Inco and Falconbridge, and only small volumes from Eramet and Norilsk.

PCC: "*PCC has reviewed over 20 different nickel suppliers worldwide. Because of purity issues, none can be considered to be an alternative supplier. PCC has tested products from Anaconda, OMG, WMC (BHP Billiton), and Sumitomo. None of these producers was able to supply high-purity nickel that met PCC's specifications.*"[264] According to PCC, OMG, Bindura, Tocantins, Sumitomo, Anglo-American and BHP Billiton all produce a product with levels of trace elements too high to meet PCC's specifications[265]. PCC also indicates that Bindur Nickel and Rio Tinto's Empress refinery lack consistent delivery and technical ability and have not been serious bidders for PCC's business. Bindur Nickel produces nickel with inconsistent product quality. Rio Tinto's Empress refinery total capacity is only approximately 3,700 MT per year[266].

Carpenter: "*The suppliers certified by Carpenter for the production process of super alloys are Inco, Falconbridge, Eramet and Norilsk.*" "*No other suppliers produce nickel of the purity Carpenter requires.*" [267]

CAPI: "*INCO, Eramet and Falconbridge are the only approved superalloy nickel producers at this time.*"[268] "*The Chinese producer Jinchuan, the Russian producer Norilsk, and the Brazilian producer Tocantins (...) manufacture product that may be suitable for use in aerospace super alloys. (...) Australian ore bodies generally contain excessive levels of selenium, which eliminates those producers from consideration. Japanese refined nickel is of very high quality. Most of the Japanese nickel however is consumed internally.*"[269] "*We are currently evaluating nickel produced by the Chinese company Jinchuan.*" "*Jinchuan has been tested in automotive alloys only at this time, and is currently not approved for aerospace alloys.*"[270] "*OMG: not suitable for production of aerospace superalloys.*"[271]

Another super alloy manufacturer states that it is aware of only three suppliers that are able to meet their needs for certain types of high purity, low residual prime nickel products – Inco, Falconbridge, and Eramet."

A **market player:** "(*the market player) mainly purchases high purity nickel (>99.95% Ni) in the form of 2 in. x 2 in. electrolytic cut cathode squares from Falconbridge, and from Inco, Carbonyl Nickel pellets. (the market player) also purchases from Eramet, nickel in the form of 2 in. x 2 in. electrolytic cut cathode squares.*" "*The higher purity*

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264 PCC's response to questions 12(c) and (d) of the request for information of 20 March 2006.

265 PCC's response to question 15 of the request for information of 20 March 2006.

266 PCC's response to questions 13 and 15 of the request for information of 20 March 2006.

267 Carpenter's response to questions 12 (a) and 15 of the request for information of 20 March 2006.

268 CAPI's response to question 12(a) of the request for information of 20 March 2006.

269 CAPI's response to question 12(a) of the request for information of 20 March 2006.

270 CAPI's response to questions 9 and 12(d) of the request for information of 20 March 2006.

271 CAPI's response to question 15 of the request for information of 20 March 2006.

nickel products offered by Inco and Falconbridge form the basis of (the market player)'s alloy production, and its internal specifications can only be met with these high grades of nickel. (the market player) has evaluated nickel from other suppliers, but (it) has not found them capable of supplying material suitable for its requirements. (The market player) is not aware of any other nickel supplier capable of meeting its requirements in the foreseeable future."[272]

Special Metals has certified Inco, Falconbridge, Eramet and Norilsk. These are the only suppliers with suitable products based on Special Metals' market knowledge.[273]

ThyssenKrupp VDM: "*We do not really have a second choice, because just three suppliers are able to offer high purity nickel. We already have contracts with two suppliers.* [...]*****. *The third supplier is tonnage wise the smallest supplier and at least the most expensive one.*"[274] "*Jinchuan does not supply to Europe on a regular basis. Sumitomo: we do not know the product quality. Rest of the mentioned suppliers are unable to meet the specification.*" [275]

A market player[276]**:** According to a market player, Chinese nickel suppliers have very little material that meets their requirements.

(324) An examination of the technical characteristics of the nickel products offered by the other nickel producers show that only a handful of them are able to meet customer specifications.

(325) A comparison of the specifications for high purity nickel of super alloy manufacturers and of the specifications of the nickel produced by all nickel producers confirms that only Inco, Falconbridge, Eramet (and to a lesser extent Norilsk) produce high purity nickel required by super alloy manufacturers. All the limits on impurities must be respected, as super alloy manufacturers simply do not buy unless the high purity nickel meets their specifications. Other nickel producers have indicated that they do not produce high purity nickel meeting super alloy producers' requirements[277]. Sumitomo indicates that it does not produce a broad range of nickel products for super alloy manufacturers, and that it does not know exactly what proportion of its nickel products

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272 A market player's response to questions 5 and 44 of the request for information of 26 January 2006.

273 Minutes of the conference call of 22 February 2006 with Special Metals.

274 ThyssenKrupp VDM response to question 8 of the request for information of 20 March 2006.

275 ThyssenKrupp VDM response to question 15 of the request for information of 20 March 2006.

276 Minutes of the conference call with a market player.

277 See response of BHP Billiton.

that is used for super alloys, but believes it is very small[278]. Sumitomo further indicates that it does not export its nickel products outside Japan[279].

(326) In its response to the Statement of Objections, Inco claims that it has identified 9 suppliers other than the parties and Eramet who are active in the supply of nickel used in super alloys: Norilsk, Jinchuan, Tocantins, Bindura, WMC, Impala, Sherritt, Sumitomo and Empress.

(327) The Commission notes that super alloy manufacturers can only purchase nickel from certified suppliers. Super alloy manufacturers can be expected to have strong incentives to certify as many suppliers as possible, in order to create competition between suppliers and to ensure their security of supply during strike periods of Inco and Falconbridge. The fact that super alloy manufacturers have certified only a few nickel suppliers – especially if certification is as easy and low-cost as the parties claim – shows therefore the lack of alternative suppliers of high purity nickel.

(328) The Statement of Objections notes that, apart from Inco, Falconbridge and Eramet, which have been certified by all super alloy manufacturers, Norilsk had been certified by a few super alloy manufacturers. Norilsk, however, has only a limited production of suitable high purity nickel and is not a consistent supplier of super alloy manufacturers. In addition, as noted in the Statement of Objections, Sumitomo and Jinchuan are believed to have some high quality nickel. However, they have not been certified by any super alloy manufacturers at this stage and do not exercise any competitive constraints on the parties for the reasons detailed below. According to most super alloy customers, the other nickel suppliers listed by Inco do not produce nickel of a suitable quality.

The very few other producers of high purity nickel used in super alloys cannot exercise any competitive constraint on New Inco

(329) As explained above only Eramet, Norilsk and Sumitomo have been cited by customers as being possible alternatives to Falconbridge and Inco. These suppliers have limited ability to compete in that market as they face capacity constraints, inability to expand their production capacity, and inability to produce at consistent high standards.

Eramet

(330) Eramet is a small, capacity-constrained supplier that is not able to exert a significant competitive constraint[280]. In addition, Eramet has higher costs than its competitors. Brook Hunt 2005 charts comparing estimated costs for nickel refineries as of 11 October 2005[281] show that Eramet's Sandouville SLN refinery has the highest costs of all nickel refineries, with unit costs of approximately USD 0.60/lb (compared with

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[278] Response of Sumitomo to questions 68 and 69 of the request for information of 24 March 2006.

[279] Response of Sumitomo to question 77 of the request for information of 24 March 2006.

[280] Eramet's production capacity is limited to 12,000 MT (Form CO, Table 5, p. 43).

[281] […]*.

approximately USD 0.20/lb for Sumitomo, USD 0.32/lb for Falconbridge Nikkelverk and Inco Thompson and USD 0.47-0.48/lb for Inco Copper Cliff), with labour costs of approximately USD 0.34/lb (compared with USD 0.12/lb for Falconbridge Nikkelverk and Inco Thompson, and USD 0.22/lb for Inco Copper Cliff), although Eramet's Sandouville refinery has relatively low energy costs (approximately USD 0.06/lb), compared to approximately USD 0.05/lb for Inco Thompson and approximately USD 0.06/lb for Inco Copper Cliff, but USD 0.1/lb for Falconbridge Nikkelverk.

(331) A table on 2004 refining costs submitted by Inco[282] also indicates that Eramet had the highest refining costs:

2004 REFINING COSTS (C-1 Cash) – BROOK HUNT COST STUDY		
	Refining Cost (2004 data) (USD/lb)	**Refining Cost (2005 data) (USD/lb)**
Falconbridge-Nikkelverk	**0.40***	**0.35**
OMG	**0.37**	**0.38**
Tocantins	**0.50**	**0.46**
BHP Billiton/WMC	**0.76**	**0.70**
Sumitomo	**0.25**	**0.24**
Eramet/SLN	**1.08**	**0.81**

[...]*.

(332) In its response to the Article 6(1)(c) decision, Inco claims that Eramet's nickel production capacity is in reality 16,000 MT. However, in an earlier presentation to the Commission, the parties indicated that Eramet's potentially available production for high purity nickel used in super alloys amounted to 13,000 MT[283]. This is also confirmed by Eramet's website, which indicates that its production capacity for high purity electrolytic nickel is 13,000 MT per year. 16,000 MT is Eramet's total production capacity and this includes production of 3,000 MT/year of nickel in the form of nickel chloride crystallised and in solution, which cannot be used in super alloys. Eramet indicated that its production of high purity nickel has been on average 9,000 MT over the last five years. Eramet is capacity-constrained, primarily due to feedstock shortage[284].

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[282] Submission of Inco to the European Commission of 24 March 2006, p. 9.

[283] Presentation to the European Commission "Competitive Effects Analysis", 14 February 2006, p. 16.

[284] Eramet's response to question 71 of the request for information of 23 March 2006.

(333) It must be noted that like Inco and Falconbridge (which have a much larger production capacity), some of Eramet's high purity electrolytic nickel is sold on the plating and electroforming market which attracts even higher premiums than the super alloy market, and for which the transaction also raises competition issues. It is therefore incorrect to assess Eramet's competitive strength on the basis of its total production capacity for high purity electrolytic nickel.

(334) Super alloy manufacturers only purchase small volumes from Eramet, which is perceived as a capacity-constrained and more expensive supplier.

PCC indicates that Eramet's production capacity is spoken for […]* and the company has no plans to expand production[285]. PCC purchases small quantities of nickel (about 1% of its high purity nickel supply) from Glencore, a spot trader. This material is purchased by Glencore from Eramet, which has been certified by PCC.

Carpenter: "*Due to their limited capacity, Eramet is, however, not able to supply Carpenter with any significant volumes of the nickel they need. Carpenter is therefore not in a position to switch to another supplier.*" [286]

Special Metals indicates that Eramet has small production capacities for nickel (14,000 MT) and uses most of what it produces internally (Aubert & Duval). Very little Eramet nickel is sold in the West. Special Metals purchases 50 MT a month from Norilsk for its West Virginia plant and 20 MT a month from Eramet or Falconbridge for its NY plant. These are very small quantities. The rest of high purity nickel is purchased from Inco[287].

ThyssenKrupp VDM: "*We do not really have a second choice, because just three suppliers are able to offer high purity nickel. We already have contracts with two suppliers. The third supplier (Eramet) is tonnage wise the smallest supplier and at least the most expensive one.*"[288]

CAPI: "*Eramet: excellent quality, though limited availability in the USA.*"[289]

A market player submits that Glencore is a spot trader and not a consistent supplier, but occasionally has material from Eramet. The market player has certified Glencore even though it only purchases small volumes from Glencore. Most of what Glencore supplies is for non-critical, non-rotating material. According to this market player, Eramet's prices are too high.[290]

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285 PCC's response to questions 8 and 15 of the request for information of 20 March 2006.

286 Carpenter's response to question 8 of the request for information of 20 March 2006.

287 Minutes of the conference call of 22 February 2006 with Special Metals.

288 ThyssenKrupp VDM response to question 8 of the request for information of 20 March 2006.

289 CAPI's response to question 15 of the request for information of 20 March 2006.

290 Minutes of the conference call with a market player.

A market player indicates that "*Eramet's delivery terms are not as satisfactory as the delivery terms set and respected by Inco and Falconbridge. More particularly, Eramet is not very punctual in delivery timing or consistent in delivery quantities. Eramet would therefore not be viewed as a viable second source of supply after the proposed merger.*"[291]

A market player states that "*Eramet only produce a relatively small quantity of high purity nickel for aerospace usage. They are not cost competitive.*" [292]

(335) In its response to the Statement of Objections, Inco takes the view that Eramet produces sufficient suitable nickel to cover total global demand for nickel used in super alloys for safety critical parts and that there is no reason why Eramet could not expand its refinery on a cost-effective basis.

(336) However, Eramet's maximum production capacity is 13,000 MT, which is insufficient for a relevant market with a size of [60,000 – 80,000]*MT, or even for the narrower market for supply of high purity nickel for super alloys used in safety critical parts estimated at 15,000 MT by the parties. In addition, Eramet indicates that its actual production was 9,000 MT and that it cannot increase its production because of lack of feed[293].

(337) In conclusion, the Commission's in-depth investigation has clearly shown that Eramet does not exercise any competitive constraint on the parties, as it has a limited ability to compete on account of limited production capacities, inability to expand its production further due to lack of feed, and higher production costs.

Norilsk

(338) Norilsk's production capacity for high purity nickel is even more limited than Eramet's, and Norilsk is also not perceived as a reliable supplier of high purity nickel, in particular due to issues with the consistency of its production. According to Eramet, only Inco, Falconbridge and Eramet are currently certified nickel producers for production of super alloys for critical parts. Norilsk products may be used for some non-critical parts, but Norilsk has not succeeded in being certified on the higher end of the market, due to insufficient product quality[294].

(339) According to the parties, Norilsk's potentially available production for high purity nickel is [5-15,000]* MT[295]. […]*[296]. [...]*[297] [298].

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[291] A market player's response to question 13 of the request for information of 20 March 2006.

[292] Response of a market player to question 13 of the request for information of 20 March 2006.

[293] Eramet's presentation at the hearing of 29 May 2006, slide 14.

[294] Eramet's response to questions 72 and 85 of the request for information of 23 March 2006.

[295] Presentation to the European Commission "Competitive Effects Analysis", 14 February 2006, p. 16.

[296] [...]*.

(340) Super alloy manufacturers indicate that they are only able to purchase very small quantities from Norilsk.

Carpenter: "*However, Norilsk has not been willing to supply Carpenter in the US since they do not have significant capacity to supply the US market.*"[299]

Special Metals indicates that Norilsk has an old carbonyl plant (dating from before the Second World War) copying an Inco process with limited production of high purity nickel of which very little is sold in the West. This plant has not been upgraded. Special Metals purchases 50 MT a month from Norilsk for its West Virginia plant and 20 MT a month from Eramet or Falconbridge for its NY plant. These are very small quantities. The rest of their high purity nickel is purchased from Inco[300].

PCC: "*Norilsk's production is spoken for and it lacks the technical ability to expand its volume of production.*"[301]

A market player certified Norilsk, but no longer purchases from them because of pricing and delivery problems. Norilsk has only a small carbonyl facility with a very limited capacity, which produces high grade pellets. [...]* Norilsk does not want to expand its production capacity for high purity nickel. Norilsk has complained about the constraints related to supplying high purity nickel and prefers to focus on commercial grade nickel. Norilsk does not appear interested in developing its high purity nickel production activities as it would require costly and long industrial and commercial investments. This facility was established in the sixties but has not been kept up to date since then. Norilsk was supplying nickel to the Russian aerospace and military industry.[302]

A market player[303] indicates that "*Norilsk currently supplies high purity nickel required by (the market player), but only produces a very small volume of this*."

A market player indicates that "*Norilsk Nickel has been approached but they cannot produce the high level of purity required by some of our components.*"[304]

(341) This is confirmed by Norilsk which indicates that a vast majority of its nickel production is cathode nickel, which is not suitable for the super alloy industry because

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297 [...]*.

298 [...]*.

299 Carpenter's response to questions 2 and 12(a) of the request for information of 20 March 2006.

300 Minutes of the conference call of 22 February 2006 with Special Metals.

301 PCC's response to question 15 of the request for information of 20 March 2006.

302 Minutes of the conference call with a market player.

303 A market player's response to questions 2 and 12(a) of the request for information of 20 March 2006.

304 Response of a market player to question 14 of the request for information of 20 March 2006.

of its size and insufficient purity.[305]In addition, Norilsk indicates that it uses different ores whose ratio varies for a number of reasons pertaining to the technology used by Norilsk. This leads to fluctuations in the quality of its nickel products, in particular variations in the actual composition of the impurities although the overall amount of impurities in products remains stable[306].

(342) PCC indicates that neither Glencore (supplying Eramet cathodes) nor Norilsk (together or separately) can supply all of PCC's high purity nickel requirements. No supplier has capacity to increase its output. Moreover, PCC requires more high purity nickel than Glencore and Norilsk can produce. These suppliers consistently have declined PCC's requests to increase their output sold to PCC. In 1999, PCC requested that Glencore increase the amount of high purity nickel it sold to PCC, but Glencore declined. PCC made the same request to Norilsk approximately three times in the last three years, and each time Norilsk declined as well[307].

(343) In its response to the Statement of Objections, Inco simply contends that Norilsk's mere presence on the market is sufficient to exert a competitive constraint even though its products are not suitable for use in every individual application […]*.

(344) The Commission notes that many super alloy customers do not consider that Norilsk products are suitable – as recognized by Inco, and few of them have certified Norilsk. In addition, super alloy customers who have certified Norilsk can purchase only very small quantities from Norilsk (from a small carbonyl plant). […]*. In those conditions, it is difficult to consider that Norilsk exercises a competitive constraint on the parties in relation to high purity nickel for super alloys.

(345) In conclusion, the Commission's in-depth investigation has clearly shown that Norilsk does not exercise any competitive constraint on the parties, as it only produces very small quantities of high purity nickel suitable for use in super alloys (and of a lower quality and with less consistency than the parties) and that it does not have the technical ability to further expand its small production capacity for high purity nickel. Norilsk does not represent an alternative source of high purity nickel for super alloy manufacturers.

Chinese and Japanese suppliers

(346) The Commission's in-depth investigation has shown that Asian nickel producers, even assuming they produce high purity nickel suitable for super alloys, do not exercise any competitive constraint on Inco and Falconbridge because of their limited production capacity, especially in view of the booming nickel demand in Asia, and their competitive disadvantage in terms of higher transportation costs. The Asian nickel

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[305] Information provided by Norilsk in Sheet 9 in response to question 15 of the request for information of 29 January 2006.

[306] Response of Norilsk to question 97 of the request for information of 23 March 2006.

[307] PCC's response of 17 February 2006 to question 3 in the e-mail of the Commission of 15 February 2006.

producers Jinchuan and Sumitomo do not export (or only very small quantities) to the EEA or United States.

(347) PCC indicates that the two Chinese producers, Chengdu ES and Chongqing Smelter, do not export to the U.S. Market[308]. According to PCC, Jinchuan's sales are limited to China; it does not export and cannot supply PCC[309].

(348) According to CAPI, "*Sumitomo (has) excellent quality (nickel) but with very limited availability.*"[310] This is confirmed by Sumitomo, which indicates that it does not produce a broad range of nickel products for super alloy manufacturers, and that it does not know exactly what proportion of its nickel products is used for super alloys, but believes it to be very small[311]. Sumitomo further indicates that it does not export its nickel products outside Japan[312].

(349) Although the market for the supply of high purity nickel used in super alloys is global, internal documents of the parties show that their geographic proximity to the plants of super alloy manufacturers (mostly located in the USA) gives them a competitive advantage and that, by contrast, Asian nickel suppliers have a competitive disadvantage in terms of transportation costs, not only on account of their distant location but also on account of higher transportation costs in the directions Asia-EEA and Asia-USA than in the direction USA-Asia or EEA-Asia.

Inco: […]*[313]. […]*[314]. […]*[315].

[...]*.[316]

(350) The fact that Asian producers face higher transportation costs to ship nickel products to the EEA or to the USA is also confirmed in the responses of other nickel suppliers.

OMG/Bindura/Empress (Rio Tinto)/BHP Billiton/Anglo American/Tocantins

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308 PCC's response to question 8 of the request for information of 20 March 2006.

309 PCC's response to question 15 of the request for information of 20 March 2006.

310 CAPI's response to question 15 of the request for information of 20 March 2006.

311 Response of Sumitomo to questions 68 and 69 of the request for information of 24 March 2006.

312 Response of Sumitomo to question 77 of the request for information of 24 March 2006.

313 […]*.

314 […]*.

315 […]*.

316 […]*.

(351) As indicated above, the Commission's in-depth investigation has confirmed that OMG (refinery in Finland with feed from OMG's Cawse mine and third parties), the African producers Bindura and Empress, the Australian producer BHP Billiton, Anglo American (with nickel mines and operations in Brazil, Venezuela and South Africa) and the Brazilian producer Tocantins do not produce nickel of a sufficient purity for use in super alloy production. For example, PCC indicates that OMG, Bindura, Tocantins, Anglo-American and BHP Billiton all produce products with levels of trace elements too high to meet PCC's specifications[317]. CAPI indicates that "*Australian ore bodies generally contain excessive levels of selenium, which eliminates those producers from consideration*"[318] and "*OMG: not suitable for production of aerospace superalloys*"[319].

(352) The production capacity and reliability of some of these suppliers is also limited. PCC also indicates that Bindur Nickel and Rio Tinto (Empress refinery) lack consistent delivery and technical ability and have not been serious bidders for PCC's business. Bindur Nickel produces nickel with inconsistent product quality. Rio Tinto's (Empress refinery) total capacity is only approximately 3,700 MT per year[320].

(353) It follows from the above that competition in the market for the supply of high purity nickel to the super alloy industry has been mostly driven by the rivalry between Inco and Falconbridge and that other market players have only been able to exercise very limited (if any) competitive constraints on the parties.

New Inco will be able to increase prices for high purity nickel used in super alloys

(354) As demonstrated above, Inco and Falconbridge are the main suppliers competing on the market for the supply of high purity nickel used in super alloys. Customers have only been able to switch between these two suppliers, based on the price and delivery terms offered.

(355) Following the transaction, New Inco would have the power to increase unilaterally prices for high purity nickel used in super alloys, while facing limited competitive pressure from any other existing suppliers of high purity nickel or from potential competition. In addition, the proposed transaction could restrict the security of supply of super alloy nickel customers in the event of strikes at New Inco.

Current market conditions show the potential upside for an increase in prices

(356) Most super alloy manufacturers and customers expressed concerns about the transaction, which will reduce the number of suppliers of high purity nickel from 3 to 2, leaving New Inco facing effective competition from Eramet only. Because Eramet has

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317 PCC's response to question 15 of the request for information of 20 March 2006.

318 CAPI's response to question 12(a) of the request for information of 20 March 2006.

319 CAPI's response to question 15 of the request for information of 20 March 2006.

320 PCC's response to questions 13 and 15 of the request for information of 20 March 2006.

limited capacity, and its pricing has been historically higher than that of Inco and Falconbridge[321], super alloy manufacturers expect an increase in the price of high purity nickel used in super alloys in view of the lack of competition post-transaction, through an increase in the premiums that they have to pay over the LME.

(357) This is particularly the case in a market context where the demand for high purity nickel is growing, while there is a shortage of supply of high purity nickel. Super alloy customers indicate that none of the three current suppliers of high purity nickel can increase their current production of high purity nickel to any degree, which already makes it difficult for customers to get additional tonnages.

(358) As a result of this tight market, premiums for the high purity nickel used in super alloys have already increased during recent years. This is evidenced by the super alloy customers' answers.

(359) According to PCC, "*during the past three years, the premium charged on high purity nickel (i.e., nickel with a purity level of 99.97% or higher) has increased. During the past year alone, the premium has sharply increased in the United States and in the European Economic Area. The main reasons for the increase in the premium price are (i) the increasing demand for high purity nickel, which is a key ingredient in the manufacture of super alloys for critical rotating parts of aero engines and industrial gas turbines ("IGTs"); (ii) the relatively static supply of high purity nickel controlled largely by Inco and Falconbridge; and (iii) the inability of other suppliers to expand their output because of technical and other reasons. The combination of Inco and Falconbridge into a new company will leave no real competition to check the rise in the premium charge by the suppliers. Nor is the spot market a realistic check on the increasing premium according to PCC; spot market surcharges were as high as $0.50 in the past year and expected to rise in the future"*[322]. PCC indicates that in recent years, its suppliers have refused to increase their supplies of high purity nickel at reasonable prices (Falconbridge and Inco), or have been unable to do so because of lack of volume (Glencore supplies of Eramet nickel), or because of lack of volume and technical ability (Norilsk)[323].

(360) According to a market player, *"New Inco will have tremendous power to restrict competition, given the inability of new companies to effectively enter competition for high-purity sales, the present lack of excess high-purity capacity in the market, and the increasing demand for high-purity material."*

(361) According to Imphy Alloys (Arcelor), premiums for high purity nickel have risen considerably between 2003 and 2005 due to an increasing fear of nickel shortage in

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[321] Response of PCC to question 13 of the request for information of 20 March 2006; ThyssenKrupp VDM to question 8 of the request for information of 20 March 2006.

[322] PCC's response to question 6 to the request for information of 20 March 2006.

[323] PCC's response to question 14 of the request for information of 20 March 2006.

general on the one hand and a significant demand for high purity nickel alloys from aerospace, cryogenic and chemical industries, on the other hand[324].

(362) According to ThyssenKrupp VDM, over the last three years, while demand for high purity nickel suitable for use in super alloys has increased due to the increased demand for super alloys used in the aerospace and power (IGTs) industries, the production of high purity nickel by relevant producers has only increased by 2-3%. This has already led to increases in the premiums for high purity nickel in the last three years[325].

(363) Carpenter also indicates that premiums for high purity nickel have risen significantly over the last three years. According to Carpenter, the factors explaining this price rise are the steadily upward trend in interest rates and the very concentrated, "tight" nickel supply market for the high purity nickel market where supply and demand are very close[326].

The market for high purity nickel for super alloy applications is expected to continue to grow over the coming years

(364) The demand for high purity nickel is expected to continue to increase in the coming years. The latest CRU Nickel Quarterly Report of January 2006 forecasts that global consumption of nickel in non-ferrous alloys, especially super alloys and high nickel alloys for use in liquid natural gas (LNG) tankers, will rise by 5.1% per year between 2005 and 2010, boosting demand in this sector by almost 50,000 MT during this period. According to CRU, the current upturn in demand for super alloys is being driven mainly by the aircraft industry. Following a lengthy downturn in the early years of this decade, orders for commercial aircraft have picked up strongly and this is leading to robust demand for super alloys. Although the aircraft sector is highly cyclical, the recovery is expected to continue for several years, with the next downturn unlikely to emerge until close to the end of the decade. This suggests that the demand for super alloys for aircraft applications will remain strong for at least another 3-4 years[327].

(365) In addition, the demand for nickel products of the highest purity is expected to grow, as new generations of jet engines are being developed. "*Heat-resistant nickel alloys that can withstand temperatures of more than 1,000 degree Celsius are critical components of the jet engines that power large aircraft. Environmental concerns and high fuel prices are creating demand for engines to burn fuels more efficiently. This requires ever-higher temperatures and even more sophisticated alloys.*"[328]

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[324] Response of Arcelor to question 6 of the request for information of 20 March 2006.

[325] See, inter-alia, the response of ThyssenKrupp to question 6 of request for information of 24 March 2006.

[326] Carpenter's response to question 6 of the request for information of 20 March 2006.

[327] CRU International Limited, Nickel Quarterly January 2006, p. 36.

[328] Dow Jones article [...]*.

(366) This trend is also confirmed by internal documents of the parties: [...]*[329].

> The 13-week long strike at Inco's Sudbury operations in 2003 demonstrates a high diversion ratio between Inco and Falconbridge and hence, New Inco's ability to raise prices in the future

(367) The following event described below sheds some light on the extent of demand substitution between Inco and Falconbridge nickel products to super alloy customers and the extent to which New Inco could raise prices after the merger. As will be shown below, a sharp drop in Inco super alloy business has resulted in a surge of sales for Falconbridge nickel products. This tends to demonstrate that Falconbridge exerts significant competitive pressure on Inco.

(368) A three-month strike at Inco's Sudbury operations impacted on sales of nickel products in the second half of 2003, and in particular on sales to super alloy customers. The strike that began 1 June 2003 affected all Inco's operations, mining, smelting and refining. During the entire strike period, there was effectively no production from these operations which normally produce about 9,000 MT of primary nickel per month.[330] And even after the strike ended Inco experienced problems which had not been anticipated at the Sudbury smelter and related facilities. These problems were associated with the ramp-up of those facilities after the strike. Inco stated in its 2003 10K filings that all problems were resolved in the fourth quarter of 2003.

(369) According to Falconbridge 2004 10K filings, Inco's strike removed approximately 30,000 MT of nickel from the market in the second half of 2003. During that time Norilsk released about 60,000 MT of nickel that had been used as collateral for a loan. As a result, the overall deficit of nickel in 2003 was more than offset by Norilsk actions. However, Norilsk is only a marginalplayer on the super alloy market, and its actions have had little impact on that market.

(370) Because Inco's Sudbury operations produce pellets, which are essentially sold for the production of super alloys, the Commission focused on the impact that the strike had on the sales of this product. The table below reproduces total sales volume of pellet to super alloy customers before and during the strike and its aftermath.

	January – May 2003	June – October 2003	Percentage Difference
Pellet Super Alloy	[…]* (MT)	[…]* (MT)	[…]*%
	February – May 2003	June – September 2003	Percentage Difference

[329] [...]*.

[330] Inco 10K 2004.

Pellet Super Alloy	[…]* (MT)	[…]* (MT)	[…]* %

Inco total sales volume to super alloys customers -- before and during the strike

(371) The effect of the strike is readily observable from the data. The strike led to a sharp drop in sales of around […]* % to super alloy customers. The Commission compares total sales volume using a period of reference of either four or five months before the strike and during the strike and its aftermath. Because sales are quite lumpy, averaging over several months smoothes out high variations in sales.

(372) Concomitantly, during the strike period Falconbridge sales of nickel product to super alloy customers rose substantially. The increase in Falconbridge sales should be appreciated in a context of weak demand for high purity nickel. In its 2004 10K filing, Inco notes that *"the growth in nickel demand in 2003 was concentrated in the stainless steel sector, the largest end use of primary nickel."* Inco further comments: *"nickel demand growth in non-stainless steel applications was relatively weak in 2003, as one important end-use market, high nickel alloys for the aerospace industry, continued to struggle with new aircraft orders remaining at relatively depressed levels."* The next table reproduces total sales volume for Falconbridge.

	January – May 2003	June – October 2003	Difference
Super Alloys	[…]* (MT)	[…]* (MT)	[…]*%
	February – May 2003	June – September 2003	Difference
Super Alloys	[…]* (MT)	[…]* (MT)	[…]*%

Falconbridge total sales volume to super alloys customers -- before and during the strike

(373) In the context of a weak demand for high purity nickel products, the strike allows a conservative estimation of the diversion ratio between Inco and Falconbridge sales to super alloys customers. As shown above, as a result of the strike, Inco sales to super alloys customers dropped dramatically, while those of Falconbridge increased. In the face of such a production shortage, Inco customers have either delayed their purchases until the end of the strike or turned to other suppliers for their immediate requirements.[331] And Falconbridge appears to have largely benefited from the strike. A rough calculation shows that the increase in Falconbridge sales volume represents between [25-35%]* and [25-35%]* of Inco's total lost sales volume to super alloys customers during the strike period.

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[331] Because a strike is naturally a temporary event, it only provides a conservative estimate of the substitution pattern, and in particular of the diversion ratio between Inco and Falconbridge. A more telling experiment would assess the effect of a non-transitory output reduction, which is not the case of this particular event. Inco super alloy customers who would have to turn to rival producers may simply have delayed their purchases of high purity nickel products.

(374) Not surprisingly, Inco's output shortfall led to a price increase for both Inco and Falconbridge products. But as explained above, the final price to customers is a combination of the LME price and a premium set by each supplier. And because during the course of 2003, the LME price rose, the final price to customers also rose. However, the LME price is affected by a host of factors that concern the nickel industry in general. Hence a rising LME due to other reasons than the Inco strike would drive up the price of super alloy nickel products. Therefore, it is not possible to attribute the whole of the price increase to the Inco output shortage[332].

(375) Focusing on premiums however should allow identifying the increase in price due to the Inco output shortage. The table below presents the weighted average premiums charged by Inco to super alloy customers before and during the strike period. Despite the sharp rise in the LME, the premium for super alloy products charged by Inco also increased dramatically during the strike period.

	January – May 2003	June – October 2003	Difference
Premium	[…]* USD/MT	[…]* USD/MT	[…]* %
	February – May 2003	June – September 2003	Difference
Premium	[…]* USD/MT	[…]* USD/MT	[…]* %

Inco weighted average premium to super alloy customers -- before and during the strike

(376) The next table also shows that Falconbridge premium to super alloy customers was also on the rise during the strike period.

[332] The 2004 Inco 10K filing maintains that the LME price increase during 2003 was first due to strong growth in demand in the stainless steel industry and a reduction of LME inventories. Next, speculation about the strike and the strike itself fuelled a sharp rise in the LME price. The LME reached past the 15 000 USD/T mark at the end of the year.

	January – May 2003	June – October 2003	Difference
Premium	[…]* USD/MT	[…]* USD/MT	[…]* %
	February – May 2003	June – September 2003	Difference
Premium	[…]* USD/MT	[…]* USD/MT	[…]* %

Falconbridge weighted average premiums to super alloy customers -- before and during the strike

(377) In its response to the Statement of Objections, Inco submits first that a […]* % increase in Inco's (absolute) premium during the six months of the strike does not constitute a significant increase in the relevant price for customers. Secondly, Inco points out that premiums decreased or increased only modestly in relation to the LME price over that period. Thirdly, Inco considers that the […]* % increase in Falconbridge's absolute premium is an insignificant increase in the relevant price for customers. Fourthly, Inco criticises the fact that the Commission did not identify the impact on other producers. Finally, Inco submits that an increase in premiums does not show *"particular dependence"* or competitive constraints imposed on Inco by Falconbridge.

(378) First, it should be noted that the parties do not address the diversion of sales from Inco to Falconbridge in response to the strike. Falconbridge attracted a significant part of the lost sales volume of Inco – amounting to between [25-35%]* (see figure below)[333]. The significant shift of sales to Falconbridge shows that Falconbridge is considered by a significant part of customers as a credible alternative supplier. Those figures have to be assessed in light of the transitory character of the production reduction, allowing customers to rely on existing stocks or to delay their own production, which is not feasible in the case of a non-transitory production reduction[334].

[...]*.

(379) Secondly, with respect to the argument that the increase in the absolute premiums does not constitute a significant increase in the final price for customers, the Commission points out that the price increase must be seen in relation to the added value provided by the firms in the relevant market. For example, a price increase of an input good may have only a minor effect on the price of the final product (depending *inter alia* on the share of total input cost represented by the input good) but none the less has to be considered significant from an antitrust perspective. This is the case as the increase in the absolute premiums indicates an increase in market power on the identified market.

(380) Thirdly, Inco's arguments in favour of relative premiums (that is as a percentage of the LME price) fail to take into account that the LME price was also heavily affected by the

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333 Statement of Objections, paragraph 324.

334 See Statement of Objections, footnote 332.

strike[335] allowing significant absolute increases in premium despite moderate changes relative to LME price. In any case, it is the absolute premium which defines the change of profitability at the refinery level.

(381) As regards Inco's claim that the Commission failed to assess the effect on other producers than Falconbridge, it should be noted that the focus of the Commission's competitive assessment is on whether Falconbridge significantly constrains Inco, thereby allowing the merged entity to remove a significant constraint and to increase premiums post merger (see figure below). The experience of the 2003 strike at Inco and the increase of Falconbridge's premiums do demonstrate this is the case.

[...]*.

(382) In sum, the Inco strike reveals that Inco sales reduction to super alloy customers largely benefited Falconbridge, and that both suppliers were able to increase premiums as a result of the output shortfall. This event sheds light on the extent of the competitive constraint that Falconbridge exerts on Inco sales to super alloy customers.

Little likelihood of third parties entering the relevant market and defeating an increase in prices

(383) There are high barriers to entry in general into the nickel industry. This is borne out, in particular, by the absence of entry at least during the past ten years. This is recognised by the parties themselves.

[...]*[336] [337].

Inco:

"*Nickel is a tough and technically challenging business, as many companies have found out. The Australian laterite producers had fine technology that was difficult to apply. People tend to underestimate the challenge of developing projects, whether they use smelting or hydrometallurgical processes. Nickel is less free flowing than other metals and harder to separate from trace metals – so production requires more capital and involves higher operating expenses than copper, for instance. The long-term historic nickel price of $3 a pound does not support new development, due to the high investment required. Based on the undeveloped projects out there today, a minimum long-term nickel price of over $3.50 a pound - and I stress long-term - is required to justify the required investment.*"[338]

(384) In its response to the Statement of Objections, Inco claims that incentives to enter vary depending on long-term nickel prices, and that there were no great incentives to enter

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335 See Statement of Objections, footnote 333.

336 [...]*.

337 [...]*.

338 Speech by Peter C. Jones President and Chief Operating Officer, 19 September 2004.

the nickel industry due to cyclicality in nickel prices over the mid-1990s through 2002. Furthermore, because of the entry of the three Australian laterite projects (Murrin Murrin, Cawse and Bulong) and Inco's Voisey's Bay project, combined with oversupply created by the downfall of the former Soviet Union, there were no great incentives for other new entrants. The Commission notes that the Australian laterite projects are if anything a testimony to the difficulty of entering the nickel industry. Those projects have not met expectations in terms of production volumes and have also failed to produce high purity nickel.

(385) As regards specifically the supply of high purity nickel used in super alloys, the production of high purity nickel requires by definition that all the chemical elements other than nickel be removed in the finished nickel products. This is the result of a whole processing chain, starting with the chemical composition of the ores (whether or not they contain substantial amounts of other chemical elements than nickel, and whether or not these other elements can be technically and economically easily removed).

(386) Entry to the market for the supply of high purity nickel used in super alloys requires (i) a high level of control over the nickel intermediate products used as an input by the refinery; (ii) significant investments in order to adjust the current refining processes of third parties so that they can produce high purity nickel; (iii) access to intellectual property; and (iv) certification.

(387) In its response to the Statement of Objections, Inco claims that the Commission has underestimated the possibilities of entry and expansion in the short and medium term.

(388) Inco first argues that there are a significant number of potential entrants and possibilities of expansion in the short term. Inco merely argues that Eramet could expand production over the medium term (5-10 years), with one or more large development projects. The Commission however notes that such 5- to 10-year timeframe appears at odds with Inco's reference to the possibility of short-term entry and expansion. In addition, Eramet already mentions that it is currently constrained by lack of feed (producing 9,000 MT for a capacity of 13,000 MT); its mining projects would in any event compensate for depletion of its existing mines. Inco simply argues that Norilsk, Jinchuan, and Sumitomo already produce nickel potentially suitable for super alloys. The fact none the less remains that the Statement of Objections explains in great detail why those producers do not exercise any competitive constraint on the parties. The other suppliers are not certified by super alloy manufacturers, nor are they mentioned as potential suppliers.

(389) Inco further claims that there are no major barriers to entry in the medium term, disputing the different elements relied on by the Commission. Its arguments are examined in turn below.

Importance of vertical integration, especially for production of high purity nickel

(390) In its response to the Article 6(1)(c) decision, Inco concedes that there may be a very small proportion of global mined nickel that could not be economically refined to a purity that would be suitable for use in super alloys[339]. However, Inco claims that the overwhelming majority of ores could be economically refined to a sufficient purity for use in super alloys and that the parties do not have any particular advantage as regards the quality of feed material over their competitors. Falconbridge and other nickel refineries co-mingle intermediates from different ores, thus removing any particular advantage gained by using a particular ore.

(391) The Commission's in-depth investigation has confirmed, however, that not all ores are economically suitable for refining into nickel products suitable for super alloy production, because certain nickel ores contain high level of elements such as selenium, lead, zinc and copper that are difficult and expensive to remove. The cost of removing a specific impurity does not only depend on the cost of the additional processing required but also depends on the value of the impurity removed (for example, PGMs[340] are very profitable metals).

(392) The production of high purity nickel further depends on the capacity of the processing, smelting, and refining processes to remove all other chemical elements (technology used, investment in additional refining steps removing additional elements, etc.). This is recognised by the parties themselves[341]. Nickel suppliers may thus have to make significant investments in a new refinery or upgrade significantly an existing refinery to have the equipment to remove all unwanted impurities. Although co-mingling of different feeds by a refinery is possible, the overall feed mix must still remain within the refinery's processing capacities for each impurity. For example, if Falconbridge's Nikkelverk refinery started to use feed with higher copper content, it would need to expand its copper treatment facilities to continue to produce the same volumes of high purity nickel. Likewise, if Nikkelverk started to process new ores containing impurities not currently treated at Nikkelverk, it would likewise need to invest in additional refining steps to process these impurities in order for it to continue to produce high purity nickel[342].

(393) In this respect, the Commission's investigation has shown that consistency in the feed mix used in the refinery (which should match the refinery facilities' refining capacities

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339 Response of Inco to the Article 6(1)(c) decision, at paragraph 91.

340 "PGMs" stands for "platinum group metal"; six elemental metals of the platinum group nearly always found in association with each other. These metals are platinum, palladium, rhodium, ruthenium, iridium, and osmium.

341 Submission of Inco of 24 March 2006, "Impurities in Feedstocks are Removed Through Blending, Concentrating, Smelting and/or Purification", pp. 2 and 3.

342 In its response to the Article 6(1)(c) decision, Inco gives precisely an example of the type of investment that may be necessary to process new types of ores: […]*.

to treat specific impurities) is of paramount importance. The nickel producer Norilsk stresses that "*The super alloy industry is very demanding not only with respect to the overall allowable level of impurities in the materials it requires but to the levels of particular chemical elements within this composition too. The main goal of consumer testing is to establish the degree of stability of the material's chemical content. To a certain extent, it constitutes a barrier for new suppliers as customer specification contains not only the maximum allowable level of impurities as a whole, but rather narrow ranges of limits for every chemical element within the overall limit of impurities as well.*"[343] This makes it difficult for nickel producers to use different ores with varying content of specific impurities, which results in varying chemical composition of the finished nickel products and exceed the limit on certain specific impurities (although the finished products would nevertheless satisfy the overall maximum limit on total impurities/minimum nickel content requirements).

(394) For example, Falconbridge has provided an extensive technical support to BCL Ltd. ("BCL") (which owns a smelter in Botswana and supplies Falconbridge's Nikkelverk refinery with nickel matte) to allow it to produce the intermediate nickel products suitable for its refinery.

Access and/or development of know-how and intellectual property

(395) Nickel producer's know-how, process engineering, and organization and management are crucial to ensure consistency in the production of high purity finished nickel products to the required standards.

(396) The importance of research and development of know-how to produce consistently high purity nickel appears clearly from the Falconbridge's website:

"*Falconbridge is the second largest supplier of electrolytic NICKEL in the western world. Through over seventy years of participation in the industry and the development of NICKEL products to satisfy a wide range of applications, the name Falconbridge has become synonymous with quality, service and dependability. Falconbridge quality is the result of research and innovative technology and is reflected in the consistent high purity of its NICKEL products. Falconbridge electrolytic NICKEL, contains the lowest concentration of total impurities of any commercially available NICKEL. For melting applications, these quality products are supplied as whole cathodes 50 mm and 100 mm squares. A range of packaging options are available. Falconbridge service and dependability are well known and firmly established.*"[344]

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[343] Norilsk's response to question 97 of the request for information of 22 March 2006.

[344] http://www.falconbridge.com/documents/product_information/Fal_Melting_Applications.pdf.

Significant investments required

(397) As seen above, entry requires material investments that are not economically justified. The production of high purity nickel (assuming access to suitable technology and know-how to produce consistent high purity nickel) requires investing in additional refining facilities to remove all trace elements, some of which may be costly to remove and not have a very high value (e.g., lead and selenium).

(398) Eramet: "*Entry requires even higher capital cost than for producing equivalent quantities of commodity grade nickel products suitable for the stainless steel industry. Combined with accumulated know-how on production and market, the entry cost is too high to attract new producers, even if they produce commodity nickel*".[345] A nickel producer also indicates that its refining process/present equipment naturally produces certain purity, shape and form of products. High purity nickel 99.99% could technically be produced but the extra premium achieved for such product does not cover the extra costs (investment and additional operating costs) involved in purifying/production process[346].

Certification

(399) Last, the suppliers would need to be certified by super alloy producers and to develop a good track record over time, both of which are long processes (see above recitals (139) to (143)).

Super alloy customers will not be able to arbitrage and would therefore not be in a position to defeat an increase in prices

(400) The parties argue that, even on a market for the supply of high purity nickel to super alloy customers, the transaction is not likely to give rise to anti-competitive effects. They contend that they could not raise prices for nickel used for super alloys because of the possibilities of arbitrage. The parties distinguish between *internal* arbitrage within the total volume sold to a given customer, some of which is used in less critical applications, and *external* arbitrage between different customers[347].

Internal arbitrage is not sustainable

(401) Internal arbitrage would occur in relation to those super alloy customers which also purchase high purity nickel from the parties and use this nickel in a wide variety of end applications, some of which are less demanding applications. Inco claims that New Inco will be unable to price discriminate between nickel used in demanding super alloy applications and other nickel sold to the same customer for other applications, and that if New Inco increased the price for the high purity nickel used in super alloys, the

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345 Response of Eramet to question 86 of the request for information of 23 March 2006.

346 A market player's response to question 28 of the request for information of 27 January 2006.

347 Inco's response to the Article 6(1)(c) decision, at paragraph 147.

customers could use the high purity nickel they purchase from the parties for the less demanding applications.

(402) The Commission takes the view that there is no possibility of such internal arbitrage by super alloy manufacturers to defeat a price increase by New Inco for high purity nickel used in super alloys.

(403) First, the parties' contention is not supported by facts. Most super alloy manufacturers' nickel requirements are for high purity nickel for all, or a significant part of, their demand at a given plant location. Based on past supplies, meetings and earlier contacts, the parties are fully aware of the fact that the customer produces super alloy and requires high purity nickel, and are also able to estimate accurately the volumes of high purity nickel for super alloy applications needed by each super alloy manufacturer. This means that New Inco will be able to identify precisely the super alloy customers (and/or the proportion of super alloy manufacturers' demand) for which it can increase prices without risk of losing the customer, as it has no alternative supplier for high purity nickel[348].

(404) Secondly, even assuming that a significant part of customers' demand would be for commodity nickel, the combined entity would still have an incentive to increase its prices in respect of the part of the demand that requires high purity nickel. The higher profits on the "incompressible" demand would more than compensate for the lost sales on the more competitive part of the demand. Indeed, such lost sales could easily be made up by sales to other customers. The outcome would be more profitable than keeping low prices on all the volumes sold to the super alloy customers.

(405) In its response to the Statement of Objections, Inco reiterates that it is not capable of identifying the volume of nickel that super alloy manufacturers purchase for use in the more critical applications. Inco claims that only a small portion of the nickel that producers of super alloys for safety critical parts purchase from the parties is used for this application. According to Inco, it would be uneconomical for New Inco to raise prices for nickel used for the more critical applications because super alloys customers would switch to other nickel producers for their other nickel requirements, with the consequence that New Inco would incur larger losses by losing the very large volume of nickel sold to these customers but used in less critical applications. Furthermore, for the very small volume of nickel required in the most critical applications, customers could source this material from other producers such as Eramet, Jinchuan or Norilsk.

(406) The Commission notes that Inco's internal arbitrage argument focuses on a narrower market for the supply of high purity nickel for super alloys used in safety critical applications. However, the Commission's competitive assessment concerns the broader relevant market of the supply of high purity nickel for super alloys. Inco's arguments concerning the uneconomical character of a price increase do not hold as super alloy customers will depend on New Inco for larger volumes of their nickel sourcing than is acknowledged by Inco. This is further borne out by the fact that, even for less critical applications, super alloy manufacturers require some volumes of high purity nickel (see for example CAPI's comment cited above that "*some grades of nickel, while meeting*

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348 […]*[…]*.

the LME acceptance specification, would not be completely suitable for wholesale substitution into the automotive alloys. Our technical staff is of the opinion that certain non-aerospace quality nickel could be used in the automotive alloys only when blended with aerospace quality nickel. The OMG briquettes, for example, contain levels of deleterious tramp elements which are too high to use the nickel at 100% substitution. The OMG nickel could be substituted for 40% to 50% of the aerospace quality nickel currently used to make the automotive alloys[349]).

(407) For the reasons explained above, the Commission also disagrees that there are alternative suppliers able to supply high purity nickel for the volume of nickel used in the most critical applications in sufficient quantities.

(408) Last, the Commission notes that although the parties may not be able to know the exact volumes of high purity nickel required for the most critical applications, it is sufficient that they are able to estimate such volumes. Their internal documents contain such estimates[350].

External arbitrage is not sustainable

(409) The parties claim that they cannot price-discriminate between their super alloys customers and other customers of non-ferrous alloys (or even in the plating and electroforming industry). According to the parties, New Inco will not be able to raise prices for high purity nickel used in super alloys, as their super alloy customers could arbitrage by purchasing nickel through traders who would source it from other customers for other less demanding applications.

(410) The Commission takes the view that external arbitrage is equally unlikely to prevent New Inco's ability to increase the prices of high purity nickel for several reasons.

(411) […]* [351]. […]*[352]. […]* [353] […]* [354]..[…]* [355].

(412) External arbitrage is also complicated by the strict certification procedures applied by the super alloy producers, and the need to ensure consistent, traceable supply of nickel of the highest purity. Sumitomo notes that "*quality is the most important issue for super alloy manufacturers. So they intend to purchase high quality nickel from nickel*

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[349] CAPI's e-mail to the Commission of 19 April 2006.

[350] […]*.

[351] […]*.

[352] […]*.

[353] […]*.

[354] […]*.

[355] […]*.

producers directly"[356]. The parties can use the certification by certifying a quality only suitable for lower end applications and thereby prevent resale of the products into other more demanding end applications. Internal documents of the parties show how this would be done: [...]*[357].

(413) In addition, the supply of nickel is currently very tight and therefore such arbitrage seems unlikely to occur as customers generally cannot purchase nickel in excess of their own demand.

(414) In its response to the Article 6(1)(c) decision, Inco claims that the tight overall nickel supply does not limit the supply of nickel to any particular customer; given that the production capacity of nickel suitable for use in super alloys would far exceed the size of this market, in the event of a relative price rise for nickel used in the most critical applications, other customers would have an immediate incentive to resell their nickel that is not used internally for these applications and realise a profit from the differences in prices[358]. Inco further claims that super alloy customers could purchase nickel from traders (not directly from a nickel producer) on the basis simply of industry test certificates and select batches of nickel with suitably low levels of impurities.

(415) The Commission has found no evidence of customers relying on a systematic basis on purchasing from another customer with excess nickel or from traders. Because super alloy manufacturers require significant volumes of high purity nickel, subject to certification of the nickel supplier, and requirements of traceability (marking of batch numbers, certificates of conformity, etc.), it would appear difficult to obtain the volumes and quality assurances needed regularly and consistently simply through purchases from customers (which are not super alloy producers) with excess nickel. PCC indicates that because other companies do not necessarily purchase high purity nickel having the same raw material specifications, PCC has not considered purchasing excess nickel from competitors. Such excess nickel would have to be certified to be in compliance with PCC's materials specifications, which would add time and cost to the production process[359]. CAPI, however, indicates that sources with excess nickel would be considered, but that the nickel would have to be packaged in the original producer drum, and have certifications establishing its provenance. Traders and/or suppliers of the material would also have to be approved prior to the sale[360].

(416) Carpenter indicates that it is not possible to buy LME grade nickel from traders, on the basis simply of standard industry certificates, and select lots to use as a substitute for 99.9% nickel, as the disparity in chemistry would be too great. The processes are different and the super alloy customer would not get "good" batches that meet 99.9%

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356 Response of Sumitomo to question 78 of the request for information of 24 March 2006.

357 [...]*.

358 Paragraphs 150-151.

359 PCC's response to question 17 of the request for information of 20 March 2006.

360 CAPI's response to question 17 of the request for information of 20 March 2006.

requirements. If by chance it did happen, the super alloy customer could not utilize it in a super alloy because it would not be certified material. The process that made it would never be certified for aerospace because it would not a reliable process consistently capably of producing the required quality.

(417) A market player indicates that customers of high purity nickel cannot afford to purchase high purity nickel from traders, since by definition traders offer nickel of various origins and qualities. Serious issues occur when purchasing nickel from traders: obligatory specification tests, risk that re-certification may be necessary, lack of constancy of quality and even risk of impossibility of using the nickel purchased from traders. The market player has exceptionally bought from traders but this was not by the market player's choice: the volume purchased from traders was a result of strikes affecting Inco's production plant, and the market player was unable to find even a minimum volume of high purity nickel in the market during that period[361].

(418) In addition, some supply contracts concluded between nickel producers and traders or customers appear to prevent such arbitrage, as they include a provision explicitly prohibiting the customer from re-selling the nickel supplied[362]. [...]*[363]. Post merger, it would appear that the imposition of such clauses by New Inco would become even easier.

(419) Some customers indicate they have purchased and do occasionally purchase nickel from traders. However such purchases tend to be opportunistic for small, marginal quantities (spot purchases). Super alloy manufacturers normally conclude long-term supply contracts directly with nickel producers. Nickel purchases from traders are done only to complement normal supplies should additional quantities be needed which customers cannot obtain from their supplier. Eramet notes that purchase from other nickel customers with excess nickel or from traders may occur exceptionally, but should not be viewed as a regular form of supply[364].

(420) Last, traders' ability to supply is limited by the supply they can themselves obtain from the producers of high purity nickel. In this respect, it must be noted that, post merger, Inco and Falconbridge may choose not to sell to traders. Already today, the Commission's market investigation has shown that Inco does not normally sell nickel to traders. Glencore[365] indicated: "*We are not able to get continuous supply of certain products required for the end use applications. The major producers, namely Inco and Falconbridge have a policy to supply direct to end users and will not supply to other producers and competitors quality products.*" Falconbridge would sell occasionally to traders. A market player notes that "*fundamental philosophical differences exist*

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361 E-mail from a market player.

362 Response of Carpenter to question 17 of the request for information of 20 March 2006.

363 [...]*.

364 Eramet's response to question 78 of the request for information of 23 March 2006.

365 Response to question 33 of the request for information of 27 January 2006.

between the senior management of both companies. Whereas Falconbridge will sell product (both nickel and cobalt) to metal traders, INCO chooses not to do so. The practice of "selling into the trade" supports a worldwide network of metal traders that ultimately serve to stimulate competition. Should this practice be discontinued there may be far reaching consequences for the metals industry."[366] Furthermore, if a producer increases its prices for nickel, then inevitably traders would be forced similarly to increase their prices[367].

(421) All of the above shows that external arbitrage is not sustainable today. It would be even less likely if the merger were to be implemented and the number of market players further reduced.

Conclusion

(422) For the reasons set out above, the Commission therefore considers that the proposed operation is likely to significantly impede effective competition, in particular as a result of the creation of a dominant position, as the parties would have the ability and incentive to raise prices on the global market for the supply of high purity nickel for the production of super alloys / super alloys used in safety critical parts. The notified operation therefore does not appear to be compatible with the common market and with the EEA agreement.

Supply of high purity cobalt for the production of super alloys used in safety critical parts

(423) New Inco will become the largest and almost monopolist supplier of high purity cobalt for super alloys used in safety critical applications. According to the Commission's estimates, New Inco will have a market share of over 95% on the global market for the supply of cobalt for super alloys used in critical applications. The position of New Inco will be very strong as very few suppliers produce high purity cobalt meeting the strict specifications of manufacturers of super alloys used in critical applications. No other cobalt producer is and will be able to match the unique strengths of New Inco in terms of the high purity and consistent quality of its cobalt production, its production capacity and excellent reputation on the market for the supply of high purity cobalt used in super alloys. The other cobalt producers will therefore not be able to exercise any significant competitive constraints on New Inco, especially as regards the supply of high purity cobalt for safety critical applications. Given the significance of the barriers to entry, constraints on the future behaviour of New Inco by potential competition are likely to be minimal. As a result of the merger, New Inco will be able to increase unilaterally prices for the high purity cobalt that is required for super alloys used in some critical applications.

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366 A market player's response to question 53 of the request for information of 26 January 2006.

367 Response of Carpenter to question 23 of the request for information of 20 March 2006.

Competition on the market for the supply of high purity cobalt used in super alloys for safety critical parts is driven by the rivalry between Inco and Falconbridge

(424) As indicated above, super alloys are the major end-use application of cobalt, accounting for 20-25% of total cobalt demand[368], which represents about 10,000 MT to 12,500 MT. As indicated above, super alloy demand is forecasted to expand at 5% per year growth to 2010, which will increase the demand for cobalt.

(425) The Commission's in-depth investigation has confirmed that there are only a few cobalt suppliers able to produce high purity cobalt meeting the strict specifications of manufacturers of super alloys used in safety critical applications: Inco and Falconbridge, as well as possibly Chambishi and Jinchuan. However, only Inco and Falconbridge supply high purity cobalt for super alloys used in the most critical applications.

(426) The parties claim that even in the case of cobalt used in super alloys, customers have significant flexibility in sourcing their cobalt requirements, and that there is a significant oversupply of suitable cobalt material, with an estimated [15-30,000]* MT of 99.8% cobalt produced in 2004 compared to only [5-15,000]* MT used in super alloys[369]. In its response to the Article 6(1)(c) decision, Inco claims that several existing cobalt producers already supply 99.8% cobalt used in super alloys, and/or already make suitable cobalt products and would be ready "new entrants" (without the need to invest in a new refinery), including Jinchuan, OMG, Tocantins and Chambishi[370]. Chambishi is also currently upgrading its refining process to produce high grade cobalt suitable for use in super alloys[371]. Inco also notes that a precise purity benchmark according to cobalt content does not appear to bear out the reality of the use of cobalt in super alloys, as Norilsk still supplies 99.35% cobalt for use in super alloys, including super alloys for safety critical parts[372]. One of Inco's super alloy customers has historically purchased cobalt for super alloys used in safety critical parts from […]*. In other super alloy applications (such as medical implants), this same customer has used cobalt from […]*[373].

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368 "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 163. This is consistent with the estimate at the Cobalt Development Institute (CDI) conference on 18-19 May 2005 that cobalt demand for super alloys represented approximately 23% of total cobalt demand in 2005, and information on the website of the Cobalt Development Institute, Cobalt Facts, "Cobalt Supply and Demand" at http://www.thecdi.com/cdi/images/ documents/facts/Cobalt_Facts_Supply-Demand_000.pdf.

369 Form CO, p. 128.

370 Response of Inco to the Article 6(1)(c) decision, at paragraphs 155, 156 and 160.

371 Response of Inco to the Article 6(1)(c) decision, at paragraph 160.

372 Response of Inco to the Article 6(1)(c) decision, at paragraph 155.

373 Response of Inco to the Article 6(1)(c) decision, at paragraph 162.

(427) This alleged multiplicity of suppliers of high purity cobalt is not, however, confirmed by the Commission's investigation as regards high purity cobalt for super alloys used in the most critical applications. First, Falconbridge and Inco are the suppliers of the cobalt with the highest purity. Second, the other potential producers of high purity cobalt exercise only limited competitive constraints on Inco and Falconbridge.

Inco and Falconbridge produce the highest purity cobalt and are the only suppliers of high purity cobalt suitable for super alloys used in safety critical applications

(428) Falconbridge produces two different types of cobalt products at its Nikkelverk refinery R-cobalt cathodes at 99.95% purity and S-cobalt cathodes (with added sulphur) at 99.90% purity as broken cathodes. Only R-cobalt is suitable for use in super alloys. Falconbridge has an annual cobalt production capacity of […]* MT.

(429) Inco produces two forms of cobalt: 99.90% cobalt rounds (at its refinery in Port Colborne) and a chemical intermediate form of cobalt hydrate (at its refinery in Thompson). Only cobalt rounds are suitable for use in super alloys. Cobalt hydrate is an intermediate cobalt product (although it could be used by Inco or other refineries to produce metallic cobalt) which is not suitable for use in super alloys.

(430) […]*.

Few alternative suppliers for high purity cobalt used in super alloys

(431) First of all, [...]*.

(432) [...]*[374] [...]*.

(433) [...]*[375].

(434) [...]*[376] [377].

(435) [...]*[378] [379] [380] [381] [382].

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[374] [...]*.

[375] [...]*.

[376] [...]*.

[377] [...]*.

[378] [...]*.

[379] [...]*.

[380] "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 [...]*.

[381] [...]*.

New Inco will have a market share in excess of 95% on the market for high purity cobalt for super alloys used in safety critical parts

(436) In the Form CO, the parties estimate that […]* MT of cobalt were used for super alloys[383], but did not provide any market share estimates for the supply of cobalt for super alloys and for super alloys used in safety critical parts. In a later presentation to the Commission[384], the parties however estimated that their combined global market share for cobalt used in super alloys is [25-35%]* (Inco, [10-20%]*[385] and Falconbridge [15-20%]*). In its response to the Article 6(1)(c) decision, Inco argues that even assuming all the parties' metallic cobalt sales ([3-5,000]* MT) are made to super alloy producers, this would only be at most one third of the total global demand for cobalt used in super alloys estimated between 8,000 MT and 10,000 MT. As a result, according to Inco, there must be other competitors supplying cobalt into these applications[386].

(437) As indicated above, super alloys account for 20-25% of total cobalt demand[387]. A market player estimates that the size of the market for high purity cobalt used in super alloys amounted to 7,500 MT to 8,500 MT in 2004 and expanded in 2005 to 8,250 MT to 9,500 MT due to an upturn in the aerospace sector[388]. Formation Capital Corporation ("Formation") estimates that the market size for cobalt used in super alloys for safety critical parts is 6,600 MT (5,000 MT for Falconbridge; about 1,300 MT for Inco)[389].

(438) As regards super alloys for critical applications, the Commission's in-depth investigation has indicated that, although the exact percentage of this demand which is for the production of super alloys used in critical applications, is not known, it can be estimated at approximately [2-3,000]* MT based on the sales of Inco and

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382 [...]*.

383 Form CO, p. 128.

384 Presentation to the European Commission, M.4000 – Inco Falconbridge, Further information regarding cobalt, 12 January 2006, confidential version, p. 19.

385 In the Form CO, the parties estimated that [80-95]*% of Inco's sales of metallic cobalt in 2004, and [40-55%]* of Falconbridge's sales of R-cobalt in 2004, were made to customers using cobalt in metallic applications. On the conservative assumption that all of the cobalt sold to these customers was used in super alloys, these sales would represent [800-1400]* MT for Inco and [1,300-1,900]* MT for Falconbridge (Form CO, p. 133).

386 Response of Inco to the Article 6(1)(c) decision, at paragraph 159.

387 "The Economics of Cobalt", Tenth Edition, 2004, Copyright © Roskill Information Service Ltd. ISBN 0 862 14 893 6 […]*, p. 163. This is consistent with the estimate at the Cobalt Development Institute (CDI) conference on 18-19 May 2005 that cobalt demand for super alloys represented approximately 23% of total cobalt demand in 2005, and information on the website of the Cobalt Development Institute, Cobalt Facts, "Cobalt Supply and Demand" at http://www.thecdi.com/cdi/images/ documents/facts/Cobalt_Facts_Supply-Demand_000.pdf.

388

389 Formation's response to question 84 of the request for information of 24 March 2006.

Falconbridge's sales of high purity cobalt to super alloy manufacturers, and from the consumption of some large super alloy producers specialised in the manufacturing of super alloys safety critical parts (triple vacuum melted)[390].

(439) Market shares for high purity cobalt for super alloys used in critical applications could be calculated in three alternative ways. First, it is possible to assess market shares based on the parties' share of super alloy customers' purchases of high purity cobalt for super alloys used in safety critical parts (demand side). Secondly, it is also possible to aggregate the volumes of high purity cobalt sold by all the producers of high purity cobalt to super alloy customers for super alloy end applications (supply side). Thirdly, comparison of the production capacity for high purity cobalt suitable for super alloys used in safety critical parts of the combined entity with that of its competitors shows that the combined entity will have a very strong position.

Capacity-based calculation of market shares

(440) Total capacity of high purity cobalt for super alloys used in the most critical applications is approximately [5,500-7,000]* MT per year, and New Inco will control […]*. Inco and Falconbridge are the only suppliers of high purity cobalt for the most critical applications.

Suppliers	**High purity cobalt production capacity – critical applications (MT)**	**% of worldwide high purity cobalt production capacity**
Inco	[…]*	[…]*%
Falconbridge	[…]*	[…]*%
New Inco	[…]*	[…]*%
Total capacity	[5500-7000]*	**100%**

(441) This table does not take into account Inco's planned cobalt expansion as part of its Voisey's Bay and Goro projects, which will give New Inco an annual cobalt production of over […]* MT (or at least [5-10,000]* MT as regards metal cobalt only, given that Inco claims in its response to the Statement of Objections that it is not clear at this stage what form (metal or chemical) the Goro production will take)[391].

(442) Based on the capacity production for high purity cobalt for super alloys used in safety critical parts, New Inco will therefore have a market share of 100% and become the

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[390] Inco sold […]* MT of cobalt rounds to customers for super alloy end applications in 2004 and […]* MT in 2005. [...]* (Inco's response to question 10 of the request for information of 2 March 2006 [...]*).

[391] Formation's response to questions 53, 55 and 80 of the request for information of 24 March 2006: additional 2,200 MT from the Voisey's Bay mine and additional 4,300 MT of cobalt carbonate which will be used in chemical applications from the Goro mine.

monopolist supplier of high purity cobalt for super alloys used in the most critical applications.

(443) SFP Metals' special newsletter on the Falconbridge strike in February 2004 shows the parties' current strong position on the market for the supply of cobalt used in super alloys:

"*Refinery in Norway produces approximately 4,000 mt of Cobalt cathodes in total per annum (i.e. approximately 13% of the world total production of metal, approximately 80% of the high grade metal used in the super alloy industry. This assumes Inco material is 100% used for super alloy industry. During current super alloy slow down 50%, say, of Inco production is now sold to non super alloy usage, this translates to Falconbridge being about 90% of high grade super alloy usage Cobalt availability).*"[392]

The few existing or potential other producers of high purity cobalt for super alloys used in safety critical applications will exercise very limited competitive constraints on Inco and Falconbridge

According to super alloy manufacturers there are no credible alternative to Inco and Falconbridge for super alloys used in critical applications

(444) In its response to the Article 6(1)(c) decision, Inco claims that there are typically more certified suppliers of cobalt used in super alloys for safety critical parts, and new suppliers would generally be subject to a less stringent certification procedure than in the case of nickel[393].

(445) The Commission's investigation has shown that although super alloy manufacturers are able to purchase cobalt from other producers with lower purity cobalt, only Inco and Falconbridge's cobalt products meet their specifications for many super alloys (produced using the vacuum induction melting process). In particular, some super alloy manufacturers expressed the concern that the number of suppliers of suitable cobalt used in super alloys for the most critical applications would be reduced from 2 to 1 as a result of the merger. Carpenter notes that "*after the merger, there will be no second choice producer of cobalt of the purity sought by Carpenter*"[394].

PCC: "*There is no other non-Inco/non-Falconbridge supplier that can supply PCC with its requirements for high-purity cobalt. Aside from Inco and Falconbridge, the only other high-purity supplier is Eramet.*"[395]; "*PCC has reviewed over 10 different cobalt suppliers worldwide. Because of purity issues, none can be considered to be an*

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392 SFP document, "Falconbridge Strike".

393 Response of Inco to the Article 6(1)(c) decision, executive summary, at paragraph 3.4.

394 Response of Carpenter to question 23 of the request for information of 20 March 2006; Precision Castparts' response.

395 Precision Castparts' response to question 23 of the request for information of 20 March 2006.

alternative supplier."[396] "*PCC has tested products from Anaconda, and WMC (BHP Billiton). Neither of these producers was able to supply high-purity cobalt that met PCC's specifications*."[397] "*During 2002-2004 Inco and Falconbridge supplied [80-90%]* of PCC's high-purity cobalt; Eramet (whose cobalt is sold by Glencore, a metals trader) supplied the remaining [10-20%]*. There are no other suppliers of high-purity cobalt.*"[398]

Carpenter: "*The only suppliers certified by Carpenter are Falconbridge and Inco.*"[399] "*Carpenter is not aware of any alternative cobalt producers which could supply cobalt of the purity required by Carpenter.*"[400]

CAPI: "*CAPI has added new suppliers for cobalt within the last five years. Our current approved producers for high purity cobalt are: INCO, Falconbridge, Jinchuan, Zambian Consolidated Copper Mines (ZCCM), and Gecamines.*" According to CAPI, "*CAPI would consider Chambishi and Tocantins as additional (not necessarily alternative) suppliers. Chambishi represents the only viable African source of high grade cobalt. Chambishi is a well capitalized company that has recently upgraded their refinement facilities to produce superalloy grade cobalt. Tocantins is a Brazilian producer of cobalt with a USA marketing arrangement through Glencore.*" "*Chambishi has recently introduced a cobalt product called "Chambishi Super" which is being marketed especially to the super alloy industry. This is the only new high purity cobalt manufacturing that I know of.*" [401] It is worth noting that Chambishi is in reality the same supplier as ZCCM, as it is a company that was set up to run the cobalt plant after the privatisation of ZCCM (see recital (435)). However, CAPI further indicates that Chambishi cobalt does not meet its specifications for high purity cobalt consistently, and is essentially a mid-grade cobalt that falls between the specifications for 99.8% and 99.3% grade[402]. According to CAPI, Norilsk, Murrin Murrin, and the Congolese cobalt producers (Lubumbashi/Gecamines/UMK) do not produce cobalt of a quality suitable for super alloy production[403].

(446) In its response to the Statement of Objections, Inco claims it has identified ten suppliers other than the parties who are active in the supply of high purity cobalt for super alloys

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396 Precision Castparts' response to question 27(c) of the request for information of 20 March 2006.

397 Precision Castparts' response to question 27(d) of the request for information of 20 March 2006.

398 Precision Castparts' response to question 28 of the request for information of 20 March 2006.

399 Response of Carpenter to question 27(a) of the request for information of 20 March 2006.

400 Response of Carpenter to questions 27(c) and 30 of the request for information of 20 March 2006.

401 Response of CAPI to question 27 of the request for information of 20 March 2006.

402 Response of CAPI to question 30 of the request for information of 20 March 2006.

403 Response of CAPI to question 30 of the request for information of 20 March 2006.

used in safety critical parts: Eramet, Chambishi, Norilsk, Jinchuan, Gecamines, Tocantins, BHP Billiton, Glencore, Ameropa and OMG.

(447) The Commission notes that manufacturers of super alloys used in safety critical parts can only purchase cobalt from certified suppliers. Super alloy manufacturers can be expected to have strong incentives to certify as many suppliers as possible, in order to create competition between suppliers and to ensure their security of supply during strike periods of Inco and Falconbridge. The fact that manufacturers of super alloys used in safety critical parts have certified only a few cobalt suppliers – especially if certification is as easy and low-cost as the parties claim – shows therefore the lack of alternative suppliers of high purity cobalt for super alloys used in safety critical parts.

The very few other producers of high purity cobalt used in super alloys cannot exercise any competitive constraint on New Inco

(448) The very few other producers of high purity cobalt suitable for use in super alloys will not be able to counterbalance New Inco's significant market power owing to capacity constraints, inability to expand their production capacity, and inability to produce to consistent high standards.

Eramet

(449) PCC is the only manufacturer of super alloys for safety critical parts mentioning that it purchases high purity cobalt produced by Eramet (through the trader Glencore). Eramet is not mentioned by any other customers as a player on the market for the supply of high purity cobalt for super alloys used in safety critical parts. Another super alloy producer notes that Eramet does not produce cobalt metal, but the chemical cobalt-chlorate[404]. Eramet itself indicated at the hearing that it is not a player on this market.

(450) According to data from the Cobalt Development Institute (CDI), Eramet's cobalt production was 199 MT in 2004 and 280 MT in 2005. Eramet's maximum cobalt production capacity is 400 MT per year. Eramet is therefore a very small cobalt producer, which produces at most about 3% of the total cobalt used in super alloys, and it will not be able to exercise any competitive constraint on New Inco's significant power for high purity cobalt used in super alloys.

(451) The super alloy manufacturer PCC already indicates that it is not able to procure additional volumes of Eramet high purity cobalt: "*although Eramet is capable of producing high-purity cobalt on a consistent basis, its production is spoken for on a going forward basis, and it has no plans to increase its production capacity.*"[405] "*PCC requested that Glencore increase supplies, but Glencore declined, citing lack of volume (Glencore's high-purity cobalt is supplied by Eramet).*"[406]

Chambishi

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404 Response of CAPI to question 30 of the request for information of 20 March 2006.

405 Precision Castparts' response to question 30 of the request for information of 20 March 2006.

406 Precision Castparts' response to question 29 of the request for information of 20 March 2006.

(452) Chambishi has a production capacity of about 4,000 MT for cobalt. CAPI indicates that Chambishi cobalt does not meet its specifications for high purity cobalt consistently, and is essentially mid-grade cobalt that falls between the specifications for 99.8% and 99.3% grade[407]. This is consistent with a CRU report of March 2001, which reports that Chambishi produces cobalt cathodes with a purity of 99.65%[408]. According to ThyssenKrupp VDM, Chambishi is unable to meet their cobalt specifications. The October 2005 SFP newsletter referred to by Inco in Annex IV of its response to the Article 6(1)(c) decision indicates that the bulk of Chambishi's cobalt production is sold for batteries, electronics, powders and catalysts applications. The parties have not shown that Chambishi is really a supplier of high purity cobalt that is suitable for super alloys used in safety critical parts[409], and it is not currently a supplier of the major super alloy manufacturers specialised in super alloys for critical applications.

Jinchuan

(453) It is unlikely that Jinchuan will exercise any competitive constraint on New Inco in the future. Jinchuan and other Chinese producers have been able to expand their cobalt production capacity on the basis of ores imported from the DRC. However, export of cobalt ores from the DRC to China (with relatively high transportation costs for intermediate products with low cobalt content) would no longer be economically viable if cobalt prices decreased.

(454) Furthermore, as for nickel, Jinchuan's cobalt exports are limited due to the growing Chinese demand (especially for cobalt used in batteries). Super alloy manufacturers indicate that Jinchuan does not export to Europe[410].

BHP Billiton, Glencore, and Ameropa

(455) In the Form CO, the parties note that BHP Billiton, Glencore and Ameropa are able to supply cobalt identical to that supplied by Falconbridge as some of the cobalt they sell is toll-refined for them by Falconbridge at Nikkelverk[411]. However, the annual quantity of cobalt returned to BHP Billiton under the tolling agreement is […]*[412] [413]. BHP Billiton markets the cobalt products returned by Falconbridge on the internet.

Other producers (DRC producers, Sherrit/ICCI, OMG, Norilsk)

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407 Response of CAPI to question 30 of the request for information of 20 March 2006.

408 CRU report "The Outlook for Cobalt in 2001, A multi-client report", March 2001 […]*.

409 Response of Inco to the Article 6(1)(c) decision of 15 March 2006 at paragraph 160.

410 See response of ThyssenKrupp VDM to question 30.

411 Form CO, p. 128.

412 [...]*.

413 […]*

(456) All market players indicate that there are serious issues of reliability for producers from the DRC given the political and economic instability of the region. At this stage, very little refined cobalt is produced in the DRC, but only supply cobalt ores or other cobalt intermediate products are exported for further processing and refining abroad, mostly to China.

(457) According to Inco, Sherritt and OMG also produce high purity cobalt suitable for super alloys. However, according to Formation, Sherrit and OMG both produce briquettes that look metallic, but are really compressed powders. These products have a high cobalt content, but are not high purity cobalt suitable for super alloys used in critical applications because they contain relatively high levels of oxygen and nitrogen gas, as a result of the pressing process, as well as other trace elements which would make them ill-suited for critical applications[414]. Super alloy manufacturers confirm that OMG and Sherritt's cobalt products are not suitable for super alloys used in critical applications.

(458) Furthermore, leaving aside the issue of cobalt purity, as pointed out by many market players, U.S. companies or their subsidiaries are not allowed under U.S. laws to purchase from Sherritt as it produces from Cuban mines[415].

(459) OMG is also not perceived as a strong and viable competitor given its problems in sourcing feed. OMG has entered into a three-year toll-refining agreement with Inco from 2006 until 2008 pursuant to which it will return nickel and cobalt products to Inco.

New Inco will be able to increase prices for high purity cobalt for super alloys, especially for super alloys used in safety critical applications

(460) As demonstrated above, the only real competition existing on the market for the supply of high purity cobalt used in super alloys used in safety critical parts takes place between Inco and Falconbridge. New Inco will become the largest supplier on the market for the supply of high purity cobalt for super alloys used in safety critical parts. Following the transaction, New Inco would have the power to increase unilaterally prices for high purity cobalt for super alloys used in safety critical parts, without facing any competitive pressure from another existing or potential supplier of high purity cobalt. In addition, the proposed transaction could prejudice the security of high purity cobalt supply of manufacturers of super alloys used in critical applications in case of strikes at New Inco.

(461) As mentioned above, super alloy manufacturers are very concerned about the transaction, which will reduce the number of suppliers of high purity cobalt from 2 to 1. This is taking place in a market where high purity suppliers were already not competing vigorously. According to PCC's experience with Falconbridge and Inco, *"the suppliers have been extremely reluctant to modify their share of cobalt sold to the Company. The*

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414 Formation's response to Question 28 of the request for information of 23 March 2006.

415 The U.S. has maintained an economic embargo against Cuba since 1963 with a specific prohibition on dealing in Cuban-origin goods (through the Cuban Asset Control Regulations ("CACRs"), 31 CFR Part 515. This prohibition extends not only to raw materials, but also to any finished products that contain Cuban raw materials. A European super alloy manufacturer could not sell super alloy to a U.S. jet engine maker such as GE; Rolls-Royce could not sell its jet engines to a U.S. aircraft manufacturer or a U.S. airlines.

quantity of their sales to the Company has been stagnant for the last three years and there has been little willingness to compete for additional volumes."[416]

(462) Price increases for high purity cobalt will be even easier to implement. Unlike nickel, where the price paid by super alloy manufacturers has two components, the LME price (over which New Inco will have a limited influence) and the supplier's premium, cobalt prices are negotiated between cobalt producers/traders and customers (end users or traders), using in some cases for guidance a reference price based on the London Metals Bulletin quotations or Platt's Metals Week or BHP Billiton trading platform.

(463) This is even more so in a market context where the demand for high purity cobalt is growing, along with the growth in the demand for super alloys. PCC indicated that in the last years, its suppliers have already refused to increase their supplies of high purity cobalt at reasonable prices (Falconbridge and Inco), or for lack of volume (Glencore supplies of Eramet nickel)[417].

(464) At the same time, New Inco's high purity cobalt production capacity will increase significantly with the development of Inco's Voisey's Bay and Goro nickel mines, and Falconbridge's Koniambo nickel mine.

Barriers to entry/potential competition

(465) According to Inco, several existing cobalt producers already make suitable cobalt products and would be ready "new entrants", including Jinchuan, OMG, Tocantins and Chambishi[418]. Furthermore, according to Inco, high quality ores are not required to produce cobalt for super alloys. Falconbridge co-mingles intermediates derived from a number of different ores at its Nikkelverk refinery, and as such would lose the advantage of processing any particular ore. Some […]* % of the cobalt production at Nikkelverk in 2004 was derived from ores that were not mined by Falconbridge[419].

(466) The Commission's investigation has shown that there are significant barriers to entry into the market for the supply of high purity cobalt suitable for the production of super alloys used in critical applications. Entry into the market for cobalt used in super alloys requires a refinery capable of producing high purity cobalt. There are also technological and commercial barriers to entry into the market for the supply of high purity cobalt for super alloys used in critical applications. Technological barriers include the need to have access to and develop know-how and intellectual property. Commercial barriers are the requirement to become certified by super alloy manufacturers and their customers.

(467) The only potential competitor to New Inco on the market for the supply of high purity cobalt is the new entrant Formation (U.S.), which plans to enter the market in late 2007,

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[416] Response of Precision Castparts to question 33 of the request for information of 26 January 2006.

[417] Precision Castparts' response to question 29 of the request for information of 20 March 2006.

[418] Response of Inco to the Article 6(1)(c) decision, at paragraphs 156 and 160.

[419] Response of Inco to the Article 6(1)(c) decision, at paragraph 157.

with a production capacity of 1,500 MT (possibly 2,250 MT if it finds another source of feed to feed its refinery which is difficult according to Formation). New Inco will still have a very high share of high purity cobalt capacity. Formation is however concerned that the merger will create even greater incentives to New Inco to erect additional barriers to its entry (e.g. legal disputes, contestation of mining rights) into this market.[420]

(468) According to PCC, "*new entry into the high-purity cobalt segment is extremely unlikely because of significant barriers to entry to the high–purity cobalt market (high-purity cobalt is a by-product of the production of high-purity nickel). These barriers exist both for completely new entrants and current commercial-grade producers. For completely new entrants, these barriers include: (1) scarcity of nickel ore deposits with low levels of trace elements that are suitable for refining in to high-purity nickel and producing high-purity cobalt as a by-product; (2) the necessity of vertical integration from mining to refining, which is very expensive; (3) the substantial technical and capital requirements necessary for nickel mining and refining (13- to 20-year process that requires an investment of $1 billion to $5 billion), which produces high –purity cobalt as a by-product; (4) New Inco's ability to control costs through vertical integration, making it difficult for non-integrated competitors to challenge the company.; and (5) New Inco's holding of 30% more nickel reserves than its next largest competitor, Norilsk. For example, Anaconda attempted to produce high-purity cobalt as a by-product of high-purity nickel product using a new refining process, but ultimately was unable to do so. Anaconda's costs totalled over $1.7 billion during a seven-year period."*[421]

Super alloy customers will not be able to arbitrage

(469) The parties argue that, even on a market of high purity cobalt used in super alloys, the transaction is not likely to give rise to anticompetitive effects. In its response to the Article 6(1)(c) decision, Inco claims that there is […]* excess production of suitable cobalt for use in super alloys for safety critical parts – over […]* times as much cobalt is available as is required to satisfy the most critical applications. As a result, new could not raise prices for cobalt used in any particular application – such as super alloys for safety critical parts – because of the possibilities of both internal and external arbitrage. Given that the specifications for cobalt are not as strict as for nickel and the fact that there is an even larger pool of suppliers, the possibilities for arbitrage would be even greater according to Inco[422]. Last, Inco contests that certification and production requirements would not be a barrier to arbitrage, as two alloy manufacturers (PCC and Howmet) allegedly purchase virtually all their cobalt requirements from traders[423]. In its response to the Article 6(1)(c) decision, Inco states that alloy manufacturers can and do

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420 Formation's response to question 93 of the request for information of 24 March 2006.

421 Response of Precision Castparts to question 27(e) of the request for information of 20 March 2006.

422 Response of Inco to the Article 6(1)(c) decision, executive summary, at paragraphs 3.5 and 3.6.

423 Response of Inco to the Article 6(1)(c) decision, at paragraph 161.

sources a large proportion of their requirements for suitable quality cobalt from traders, and hence have access to an even larger pool of potential suppliers.

(470) Although the supply of high purity cobalt exceeds the demand, it remains that such supply is concentrated in the hands of two producers: Falconbridge and Inco. Contrary to the parties' contention, the Commission's investigation has shown that New Inco will have several means at its disposal to price discriminate between cobalt customers that depend on their high purity cobalt and other customers and to defeat any possibilities of both internal and external arbitrage.

(471) First, the Commission's investigation has demonstrated the parties' very successful strategy to [...]*. [...]*[424].

(472) Secondly, external arbitrage is particularly complicated by the strict certification procedures applied by the super alloy producers, and the need to ensure consistent, traceable, supply of cobalt of the highest purity. Carpenter explains that "(*the certification process consists in receiving material from the supplier, making products, and then performing quality control tests on these products. This process provides information on the purity of the material supplied by the supplier. Once these tests prove positive, Carpenter relies on Certificates of Conformity presented to them by the supplier. Such a process can take any time between six months and one year, and is costly.*"[425] "*Traceability requirements are also included in the certification document (which Carpenter receives with each shipment), which outlines, inter alia, the chemistry of the products, the date of manufacturing, the date of shipment and the date of delivery.*"[426] "*Carpenter does not carry out a certification procedure for traders; the certification relates to the source of the cobalt. Therefore, if Carpenter purchases cobalt from a trader, the certification delivered by the trader would relate to the supplier, which is, in the majority of cases, Falconbridge.*"[427]

(473) New Inco can use the certification by certifying cobalt as meeting lower quality specifications that are only suitable for lower end applications, and thereby prevent resale of the products to super alloy customers [...]*[428].

(474) The Commission's investigation has shown that traders' ability to supply high purity cobalt is limited by the supply they can obtain from the producers of high purity cobalt. "*A market player indicates that "it can also obtain cobalt of the purity it requires from traders, but their supply is limited to the supply from the two producers (Inco and Falconbridge).*"[429] "*After the merger, (...) if a producer increases its prices for cobalt,*

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424 [...]*.

425 Response of Carpenter to question 27 of the request for information of 20 March 2006.

426 Response of Carpenter to question 26(ii) and (iii) of the request for information of 20 March 2006.

427 Response of Carpenter to question 32(ii) of the request for information of 20 March 2006.

428 [...]*.

429 Response of a market player to question 23 of the request for information of 20 March 2006.

then inevitably, traders would be forced to similarly increase their prices."[430] In this respect, it must be noted that Inco does not normally sell nickel to traders. According to Glencore[431], a metals trader, "*We are not able to get continuous supply of certain products required for the end use applications. The major producers, namely Inco and Falconbridge have a policy to supply direct to end users and will not supply to other producers and competitors quality products.*" A market player also notes that "*fundamental philosophical differences exist between the senior management of both companies. Whereas Falconbridge will sell product (both nickel and cobalt) to metal traders, INCO chooses not to do so.*"[432]

(475) […]*[433].

(476) The Commission's investigation has also shown that super alloy manufacturers could not turn to other customers to obtain their high purity cobalt requirements. "*Carpenter does not purchase cobalt from other cobalt customers. Such activity would go against the practice of Carpenter's current cobalt suppliers. Cobalt supply contracts occasionally contain a term which specifically prohibits the onward sale of cobalt supplied. This is included to prevent Carpenter selling cobalt it receives at a reduced price (because it purchases in large quantities) onto a different company for financial gain.*"[434] PCC indicates that because other companies do not necessarily purchase high purity cobalt having the same raw material specifications, PCC has not considered purchasing excess cobalt from other cobalt customers. Such excess cobalt would have to be certified to be in compliance with PCC's materials specifications, which would add time and cost to the production process[435]. CAPI however indicates that sources with excess cobalt would be considered, but that the cobalt would have to be packaged in the original producer drum, and have certifications establishing its provenance. Traders and/or suppliers of the material would also have to be approved prior to the sale[436].

Conclusion

(477) For the reasons set out above, the Commission therefore considers that the proposed operation is likely to significantly impede effective competition, in particular as a result of the creation of a dominant position, as New Inco will have the ability and incentive to raise prices on the global market for the supply of high purity cobalt for the

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[430] Response of Carpenter to question 23 of the request for information of 20 March 2006.

[431] Glencore's response to question 33 of the request for information of 29 January 2006 and to question 11 of the request for information of 24 March 2006.

[432] A market player's response to question 53 of the request for information of 26 January 2006.

[433] […]*.

[434] Response of Carpenter to question 32(i) of the request for information of 20 March 2006.

[435] PCC's response to question 32 of the request for information of 20 March 2006.

[436] CAPI's response to question 32 of the request for information of 20 March 2006.

production of super alloys used in safety critical parts. The notified operation therefore appears not to be compatible with the common market and with the EEA agreement.

Restriction of global nickel supply

Arguments raised by certain third parties

(478) Certain competitors and customers also raised the issue that New Inco may control an overwhelming part of nickel ore resources available worldwide. According to those third parties, after the transaction, New Inco would become the world's largest nickel producer, with a leading position in estimated proven and probable nickel reserves as well as the largest portfolio of existing and greenfield nickel mining assets[437]. Those third parties raised concerns as regards the potential impact of the proposed transaction on future global nickel supply and on the price of nickel on the LME.

(479) Some third parties underlined that New Inco would be able to influence global nickel supply due to its significant share of mined nickel and of new nickel mining projects. As nickel supply is already tight compared to demand, this would certainly result in higher prices for all intermediate and finished nickel products[438].

(480) In particular, some third parties highlighted that the proposed operation may slow down the development of the large Koniambo mining project in New Caledonia as Inco is already developing the Goro mine on the same island. It is claimed that New Inco would not be prone to develop two large nickel mines (representing capital expenditures of close to 2 billions EUR each) on such a small territory as all mining companies seek to have some geographic diversity for their mining operations so as to minimize political and technical risks.

(481) To assess the validity of such allegations, the Commission conducted an extensive market investigation with a view to obtain up-to-date and reliable information on existing nickel mining projects, projections on nickel demand and to evaluate the ability and the incentive of New Inco to restrict the global nickel supply and to influence the price of nickel on the LME.

Current nickel reserves and nickel mining projects

Introduction

(482) In order to obtain a comprehensive view of existing and future nickel mines, the Commission referred to (i) market data published by trade publications and commodity

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[437] According to these third parties New Inco would control about half (or even more) of the nickel production coming on stream until 2009.

[438] Most nickel products are priced on the basis of the settling price over the London Metal Exchange (LME). Although LME prices may be influenced in the short term by trading activities, they are essentially linked to the balance between supply and demand and market operators' expectations thereon on the longer term. An increase in LME nickel prices would have an impact on most finished nickel product prices as the LME is used as a reference price in most nickel supply contracts.

analysts, (ii) market data provided by the parties and one its competitors and (iii) information provided by each market player about its own mining activities.

(483) Very detailed market analysis and data on new nickel mines are available in publications released by specialised commodity research consultants (Brook Hunt Report and CRU Nickel Quarterly). These reports and their forecasts are widely recognized by nickel suppliers and customers as the most comprehensive and reliable set of data on the industry and are often used as reference estimates. Besides those publications, the Commission reviewed the internal studies and reports prepared by the market information teams of Inco and of one of its competitors. These documents also list all nickel mining projects and estimate their likelihood and their potential output.

(484) Finally, during its market investigation, the Commission requested each nickel mining operator to provide a list of its nickel mining projects, including their degree of likelihood, their stage of development, the current schedule and their projected production. The Commission combined these various sources of information to obtain a prospective picture of the nickel mining industry as comprehensive and as accurate as possible.

(485) Nickel mining projects are commonly classified based on their degree of likelihood. Most market players and publications[439] distinguish "committed", "likely" and "potential" projects. Committed projects are nickel mining projects with the highest likelihood of realization and the closest time schedule. They correspond to projects for which the mining operators have already incurred significant capital expenditures and are at an advanced stage. Committed projects are generally projected to come on stream in the next three years.

(486) Likely projects have a lower degree of likelihood to be realized although they correspond to mining projects for which a feasibility study has already been achieved (or is well under way) and for which the resources and the profitability have already been established. Likely projects are generally expected to come on stream between two and four years from the time of the report and, although there are likely, their time schedule may evolve.

(487) Potential projects are less likely projects, which are still at an early stage and for which a number of further studies have to be carried out before the mining operator will actually decide to proceed further. Potential projects are in general expected to come on stream not earlier than four years after the date of the report in which they are classified

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[439] CRU's definition of capacity changes is as follows :

- Firm: There has been a definite decision by the company involved to commit funds to a project or construction has started.

- Probable: Those projects where feasibility studies have established the viability of the expansion or new projects and where, in CRU's opinion, there is a significant chance that the change will proceed.

- Possible: Full feasibility studies on the viability of the projects have yet to be completed or where there still remains considerable doubt as to the viability of the project.

as such. Potential mining projects are in general numerous although only a few will materialize in the indicated time frame.

(488) Projections on the evolution of nickel supply in the next five years may be evaluated with a reasonably high degree of confidence in view of the very long lead time to develop a new nickel mine. This time frame corresponds to the period where most of the committed and likely new mining projects, i.e. all mining projects with a reasonable degree of likelihood, will come on stream, while most mining projects classified as potential are expected to come into production at a later stage.

(489) The parties concur to a large extent to this approach and recognize that *"a five year forecast is the only realistic future period over which production could reasonably be estimated"*[440]. Referring to CRU projections, Inco further indicates that *"it is likely that these projections over the next five years have captured the major projects as it would typically take at least five years to bring a project into production, so works will have started by now and this makes the project visible"*.

Mined nickel and nickel reserves

(490) According to the CRU Nickel Quarterly (January 2006), Inco and Falconbridge together accounted for 22.3% of global mined nickel in 2005 (Inco, 16.4% (222,000 MT) and Falconbridge 5.9% (80,000 MT) out of 1,351,000 MT). In 2010, on the basis of the evolution of the production of all nickel mines, Inco and Falconbridge are expected to account for 23.7% (Inco 18.2% (322,000 MT) and Falconbridge 5.4% (96,200 MT) out of 1,770,000 KT). These figures do not take into account Falconbridge's large Koniambo mining project, expected to start production from 2010 (60,000 MT/year), as the project is only classified as a potential project. Even if this project is taken in consideration, New Inco would control approximately 26% (478,000 MT) of global mined nickel in 2010.

(491) In 2005, the largest players active in nickel mining included Norilsk (251,000 MT or 18.6%), BHP Billiton (87,000 MT or 6.4%), Eramet / SLN (62,400 MT or 4.6%) and Jinchuan (60,000 MT or 4.4%). In 2010, the largest mining operators are expected to include Norilsk (261,000 MT or 14.7%), BHP Billiton (141,000 MT or 8%), Companhia Vale do Rio Doce ("CVRD") (85,000 MT or 4.8%), Eramet / SLN (80,000 MT or 4.5%), Jinchuan (80,000 MT or 4.8%) and PT Antam (71,000 MT or 4%). Other players active in mining include Tati nickel and BCL in Botswana, Anglo American (including Anglo Platinum) and Impala in South Africa, Bindura in Zimbabwe, Tocantins in Brazil, Sherritt and Cubaniquel in Cuba and a number of players in Australia.

(492) As regards nickel projects coming on stream until 2009, CRU data on nickel mining projects and the Commission's own estimates indicate that approximately 30% of the additionnal mined nickel production will come from New Inco.

(493) In terms of nickel reserves, the parties estimate that New Inco accounted for only [6-20%]* of global nickel reserves (Inco, [5-15%]* ([6-7,000,000]* MT) and

[440] Response of Inco to request for information dated 2 February 2006.

Falconbridge, [0-5%]* ([1-2,000]* MT)) at the end of 2005. These estimates are based on US Geological Survey[441] Mineral Commodity Summary, Nickel, 2006 estimates for global nickel reserves (62,000,000 MT). If the parties' combined share of reserves is estimated on total reserves identified in public sources[442], it stands at [15-25%]* at the same date.

(494) As a summary, New Inco has several large scale mining projects in its portfolio and will increase its share of nickel mined output between 2006 and 2010 and account for around 30% of additional nickel supply over the period. However, even under the assumption that Koniambo, a nickel mining project currently classified as potential, will be developped in 2010, New Inco'share of global mined nickel production will not exceed 30% in 2010. In terms of reserves, the share of New Inco is global nickel reserves is much lower and below 15 % (end of 2005).

Major nickel mining projects

(495) The Commission's market investigation has assessed the portfolio of committed and likely nickel mining projects from a number of mining operators.

(496) According to CRU, the global mined nickel production is expected to raise by more than 400,000 MT between 2005 and 2010, from 1,35 millions MT to around 1,8 millions MT. A large share of this expansions should come from the start-up of large greenfield operations (see table below) while a number of smaller projects would also contribute to higher global output.

Project	Operator	Production capacity (MT)	Start-up date
Voisey´s Bay	Inco	60,000 MT	Q4 2005
Ravensthorpe	BHP Billiton	45,000 MT	Q2 2007
Goro	Inco	60,000 MT	Q3 2007
Vermelho	CVRD	46,000 MT	Q1 2009
Onca Puma	CVRD	57,000 MT	Q4 2008

(497) Inco's Voisey's Bay began ahead of schedule in November 2005 and the concentrate produced in the mine is currently shipped to Inco's Sudbury processing facilities. A share of this concentrate is replacement material for Inco and the remaining share will be further processed by Inco / OMG. Inco's Goro and BHP Billiton's Ravensthorpe are expected to come on stream in 2007. CVRD intends to develop in parallel the Vermelho and the Onca Puma projects for a start-up in 2008/2009. These major greenfield projects alone are expected to add 260,000 MT of nickel by 2010.

(498) Except those projects, the major brownfield expansions currently underway are at Eramet's operations in New Caledonia (+15,000 MT, 2007), at PT Aneka Tambang's operations in Indonesia (+16,000 MT, 2006), at Moa Bay in Cuba (+16,000 MT, 2007) and PT Inco's operations (20,000 MT). These expansions will bring total nickel production to 90,000 MT in 2009. Smaller brownfield expansions likely to be achieved

441 A U.S. scientific agency focusing on natural resources study.

442 Form CO, Table 23, Page 111.

in the medium term include increase from Nkomati (+5,000 MT), Falconbridge's Raglan operations (+5,000 MT), Sumitomo's Rio Tuba (+ 5,000 MT) and LionOre's Black Swan (+ 5,000 MT).

(499) As regards medium-size greenfield projects, a number of mining projects are under way in Australia: Avebury (Allegiance Mining, 6,000 MT), Forrestiana (Western Areas, 6,000 MT). Production at Falconbridge's Nickel Rim South (10-15,000 MT) is expected to start in 2009 and will contribute offset reduced production at Falconbridge's Sudbury operations, due to reserve exhaustion.

Projections on the evolution of the balance between demand and supply

(500) As regards global nickel demand, CRU Quarterly expects primary nickel demand to grow around 5.3% per year on average between 2005 and 2010, based on a recovery in stainless steel, strong growth in the segment of alloys used in the aerospace industry and increased consumption in all end applications in China. According to CRU, primary nickel consumption in the stainless steel industry will increase at an average 5.8% per year over the period while growth in non stainless steel uses will average 4.5% a year. China is expected to account for as much as 80% of nickel global growth, with a consumption increasing from 160,000 MT a year to 400,000 MT a year in 2009/2010.

(501) Most respondents to the Commission's market investigation confirmed those estimates and projected a steady growth of primary nickel consumption in the next five years, although the growth in demand may significantly be reduced in case of sustained high nickel prices. A number of respondents underlined that the current situation of high price levels is increasingly leading stainless producer to switch to lower grades of stainless, requiring less nickel. This could partly mitigate the impressive growth of stainless steel production capacities in China. As regards super alloys, demand is relatively inelastic to nickel prices and the strong momentum in the aeropsace industry will continue to support a robust consumption of nickel over the next five years.

(502) As regards the balance between supply and demand, CRU estimates that the current situation of supply deficit should continue for the next two years due to the strong recovery in the stainless steel sector. The growing number of projects coming in production should however reduce the extent of this deficit as compared to the previous two years where the increase in supply has been sluggish. According to CRU, at the end of the decade, the broad picture should change towards of more balanced market as prolonged high nickel prices may be paying off in terms of production and the stainless steel recovery should terminate. Even allowing for delays or technological difficulties in some announced mining projects, the largest projects identified above are very likely to come into production before 2010.

Ability and incentive of New Inco to restrict global nickel supply and to influence the price of nickel on the LME

Ability to influence LME prices

(503) As claimed by third parties, the fact that New Inco will control a non negligible part of the additional nickel supply expected to come on the market in the next five years (around 30%) could in principle provide it with the ability to delay a major mining project and to restrict global nickel supply. The Commission however takes the view

that it is notably unclear whether and to what extent such behaviour would impact nickel prices on the LME and that it would be constrained by the long-term responsiveness of nickel mining.

(504) Certain third parties claimed that individual events impacting the supply of nickel had an impact on the LME and provided examples of strikes at Inco and Falconbridge during the negotiations of wages and explained that prices on the LME had increased during those negotiations (anticipation of potential strikes) or during strikes. They concluded that the delay of a large mining project would have the same effect on LME prices.

(505) The Commission underlines that the impact of a strike at the mining or processing operations of one the main nickel supplier, which may significantly reduce its overall nickel production during a few weeks, should be distinguished from the impact of a delay in one nickel mining project still at an early development stage (even if it is a major nickel project) which may only materialize in three or four years time. Moreover, it is not demonstrated that any of the events affecting nickel supply pointed out by third parties did affect nickel prices on the LME over a non transitory period (more than a few weeks).

(506) The analysis of nickel prices on the LME and the market investigation did not allow the Commission to come to the conclusion that it was possible to establish a direct link between announcements related to nickel mining and non transitory increase in prices on the LME. On the contrary, a number of respondents to the market investigation explained that announcements on the time schedule of nickel mines did not have a discernable impact on nickel prices since the implications of such announcement were delayed in time. Furthermore, it would not possible to single out the impact of only one factor on LME prices, which react to a varying extent to all events and factors related to nickel supply and demand.

(507) While nickel prices on the LME are clearly based on market operators' expectations on the balance between demand and supply, a very broad range of factors influence these projections and only structural changes in the market dynamics may have a lasting impact. Examples of such structural trends include favourable announcements and expectations regarding new HPAL technologies to process nickel laterite ores which lead to depressed nickel prices in 1997-98 and the very strong build up of China's stainless steel capacity which has driven the increase in global nickel consumption in three previous years and lead to a strong upward trend on prices. These structural trends are changes that have affected the global supply or demand of nickel to a significant extent and for a long period of time.

(508) On the contrary, the announcement of a delay of one single mining project expected to come into production in more than three years is not likely to impact meaningfully the evolution of nickel supply and thus nickel prices on a lasting basis. Delays of mining projects classified as potential are frequent for a whole range of reasons (technical issues, additional feasibility studies, re-evaluation of capital cost, political or environmental issues, etc.) and the market operators are more likely to focus on factors or events impacting the portfolio of existing projects rather than a single project.

(509) In view of the above, the ability of New Inco to restrict global nickel supply and to influence LME prices seems only possible over a short period of time, in view of the responsiveness of the nickel mining industry and the broad set of factors reflected in LME prices. The Commission did not find conclusive evidence as to the lasting impact of delays in early stage mining projects, which are common, on LME prices.

Incentives to delay a committed / likely mining project

(510) As to the New Inco's incentives to restrict global nickel supply, Inco underlined in their reply to third parties claims that they had no incentives to voluntarily delay one of their likely or committed nickel projects as they would incur significant financial costs. At this stage of development, mining operators have generally already realized significant capital expenditures (acquisition of exploration rights and land, sets of drillings and assays, feasibility study, acquisition of machinery and equipment) and invested significant and valuable resources (negotiations with local authorities, geological and engineering tests and studies, project financing, etc.). The costs already incurred commonly exceed 10 millions USD and may reach a few 100 millions USD for large scale greenfield projects.

(511) Any delay in the exploitation of the mines thus corresponds to additional financial costs and in a delay in the return on the capital employed. As an example, according to the parties, total capital expenditures in the Goro project (mine, process plant and related infrastructure) is expected to pass around […]* USD at the end of 2006[443]. A one year delay in such project would deprive Inco of the profitability equal to the product of the project projected return on capital employed and the capital employed, which could be estimated at […]* USD.

(512) The argument is thus convincing for New Inco's projects such as Voisey's Bay which started its production ramp up in early 2006 or Goro, for which large capital expenditures have already been incurred. New Inco's incentive to delay a nickel mining project for which it has already incurred sizeable capital investiment are limited[444].

(513) More generally, additional financial costs may be incurred by a mining operator that voluntarily delays a mining project. In general, public authorities attempt to provide mining groups with strong incentives to develop potential mining projects timely and to build related processing facilities, as such projects provides a broad range of economic benefits (employment, infrastructure, etc.) to the area where they are developed. To achieve this objective, it is common that local authorities provide a financial support (in the form of favourable tax schemes, of advantageous loans, etc) to the project and even contribute to fund part of the required infrastructure expenditures (land, roads, power, water, etc) if the mining group commits to proceed with the projects according to an agreed-upon timetable. In addition, local authorities may also require the mining group to build a processing plant or a refinery on the mining site so as to control additional

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443 "The Production and Supply of Nickel", submission of Inco of 15 March 2006.

444 However, this does not apply to potential mining projects, where the parties have not yet realized large capital investments, such as Koniambo or Kabanga for Falconbridge for instance.

stages of the mining value chain and enhance the economic benefits of the project in the region.

(514) Examples of such agreements are to be found for Inco's Voiseys' Bay, PT Inco and Goro project respectively in Canada, Indonesia and in New Caledonia and Falconbridge's Koniambo project in New Caledonia. As an example, for Voiseys' Bay, the local government required Inco to commit to specific timetables as a condition of the issuance of the necessary environmental, construction and operating permits and approval need to process with the project. The obligations imposed by public authorities constitute an additional incentive for nickel mining operators to develop timely mining projects, as major delay could lead local authorities to reconsider the favourable conditions agreed upon. According to the parties, for PT Inco and Voisey's Bay the governments have certain rights to transfer the required mining rights or concessions to other companies if the timetables are not met. As regards Goro, if Inco were to defer or delay the start-up, it may be required to repay in an accelerated way and with penalties tax-assisted financing in excess of […]* USD.

(515) Third parties claimed that it may be possible for mining operators to avoid those additional financial costs and to circumvent these conditions as delays in mining projects may be attributed to unforeseen technical difficulties or other reasons, the validity of which might be extremely difficult to evaluate. While this may be true to some extent, the conditions on the accomplishment of certain stages of a mining projects agreed upon with public authorities nonetheless indicate that New Inco's incentive to delay even potential mining projects is at least seriously constrained (to benefit from the financial support of local authorities) and their decisions are scrutinized by public authorities.

(516) As to the potential benefits of such delay strategy, third parties highlighted that, in a tight market, the announcement of a delay in a mining project would necessarily result in higher prices on the LME. New Inco would benefit from higher nickel prices for its entire nickel production and would only defer the project's revenues in time. While such impact seems plausible, third parties did neither provide evidence to evaluate the magnitude and duration of such price increase nor identified historical examples of such events. As shown above in the discussion of New Inco's ability to influence LME prices, the Commission estimates that it is impossible to foresee the magnitude and the time period of any LME price increase resulting from the announcement of delay in a mining project. The benefits of such strategy are hence highly hypothetical and speculative (contrary to the costs associated to it).

(517) The discussion above shows that New Inco is not likely to have the incentive to delay a large scale mining project with a view to benefit from higher nickel prices on the LME. Firstly, as regards committed and likely projects for which significant capital expenditures have been engaged, such delay would prove extremely costly and may reveal difficult due to commitments vis-à-vis local authorities. Secondly, as regards potential projects, the announcement of a delay is less likely to have a lasting effect on the LME, if any, and is part of the "normal life of the project". Decisions on nickel mining projects are thus more likely to be driven by the technical feasibility and the economic profitability of a given project rather than vague speculations on potential impact on the LME.

Incentives to delay a potential mining project (Koniambo)

(518) Third parties expressed concerns more specifically about the realization of Falconbridge's Koniambo project in New Caledonia. The Commission carefully assessed the validity of such concerns and the potential impact of such delay on the nickel LME prices. It may be concluded that there is no reasonable ground to consider that the proposed transaction is likely to lead to a delay of the project and even less to estimate the potential impact of such hypothetical delay on nickel LME prices.

(519) Falconbridge holds a [<50%]* share in the Koniambo project in the Northern region of New Caledonia, the remaining share being held by SMSP, the development arm of the North Province of New Caledonia. The project has a yearly capacity of 60,000 MT. Prior to the proposed transaction, Falconbridge' press releases announced a start-up date of 2009, with the production of ferronickel (saprolite ores). In a second phase, currently envisaged to start in 2015, Koniambo may produce intermediate nickel products from limonite ores for further refining.

(520) According to third parties, New Inco would not be willing to carry out simultaneously two large scale mining projects in New Caledonia. It is claimed that the delay of the Koniambo project would enable New Inco to spread the capital expenditures over time and would be considered positively by commodity and financial analysts. New Inco would also have an economic interest in delaying the Koniambo project as long as Goro is developped and ramped-up, while, absent the proposed transaction, the two projects might have been developed in parallel by competing mining operators.

(521) On the contrary, the parties state that the experience New Inco will acquire with Goro, which is expected to start production in September 2007, will reduce the cost and the risk of the Koniambo project, the start-up of which was only foreseen in 2009. Hence, the Koniambo project would benefit from the technological expertise acquired in processing laterite ores, the training of a skilled labour force, a local knowledge and from economies of scale and synergies in New Caledonia. The Commission recognizes that, while the proposed transaction may give New Inco the incentive to delay the development of Koniambo on the one hand, it may slightly improve the economics of its exploitation and lower the technological risks, which may contribute to increase its likelihood and accelerate its realization, on the other hand.

(522) The parties also contest their alleged economic incentive to voluntarily delay the Koniambo project. As discussed above, the economic interest of such decision depends on the trade-off between a loss of revenues on the project (or delayed revenues) and the benefits derived from an hypothetical price increase on the LME. According to the parties, the decision to move forward with the project is entirely based on its technical feasibility and its economic viability. If the final feasibility and financial assessments confirm the economic viability of the project, such profitability perspectives would render costly delays in the project.

(523) In addition, the parties underline that a delay in Koniambo would offer an opportunity to New Inco's competitors to expand their market position. According to the parties, such announcement would stimulate a competitive response of nickel mining operators, which would announce the development of new nickel mining projects or speed up the development of their existing projects. While such strategic response is certainly

economically rationale, the Commission estimates that the validity of the parties' assertions and the extent of such competitive response are difficult to evaluate. As regards new projects, the long lead time required by most nickel mining projects would prevent such response from having a direct and timely impact on global nickel supply. On the contrary, the timetable of projects at a more advanced stage of development is in general already set and may most likely only exceptionally be reduced (it is more generally extended), which would also limit a rapid nickel supply responsiveness.

(524) In view of the discussion above on New Inco's set of incentives as regards the development of Koniambo, the Commission considers that there is no sufficient ground to conclude that the proposed transaction is likely to lead to a delay of the completion of the project.

(525) Furthermore, given its current stage of development and its uncertainty, Koniambo is currently classified as a potential project by CRU. According to the parties, this means that the project has not a greater likelihood to come on stream than any other project classified as potential by the publication. As indicated above, in its assessment, the Commission did not consider relevant (neither feasible) to evaluate the likelihood of or to take into consideration individually mining projects classified as potential, for which no detailed feasibility has generally been completed yet.

(526) In view of the high degree of uncertainty of each of the individual potential projects, the Commission considers that the only sensible approach as regards those projects is to evaluate the likelihood of the global portfolio of projects. This approach in terms of probabilities significantly reduces the relevance of third parties' claims on the delay of one single potential project. This possible delay does not materially modify the general picture of a broad portfolio of potential mining projects to which only a global likelihood of realization may be assigned.

(527) By nature (precisely because they are only potential projects), each potential project may be subject to varying changes in their time schedule and in their likelihood, depending on economic conditions, on the progress of feasibility studies, on political and environmental considerations, etc. The very large number of potential nickel mining projects listed by CRU, totalling an additional nickel supply of around 1,8 million MT between 2006 and 2015, shows in any case that a significant proportion of these projects will not materialize or be subject to important delays. Only a small percentage of potential projects are expected to be developed according to the timetable currently foreseen, if ever.

Conclusion

(528) The Commission carefully assessed claims by certain third parties that New Inco would have the ability and incentive to delay part of its nickel mining projects, in particular the Koniambo project and that this would have an impact on nickel LME prices. The Commission concluded that the New Inco would neither have an economic interest in delaying a mining project at an advanced stage of development (ramp up or committed) due to the significant financial cost incurred nor to delay an early stage mining project (potential) as the benefits of such announcement, in terms of higher LME prices, are highly speculative and certainly very limited in time.

Assessment of the efficiencies

(529) In the Form CO and various submissions to the Commission[445], the parties emphasized the substantial efficiencies brought about by the proposed transaction, which would allegedly benefit all nickel customers.

(530) According to the Merger Regulation[446] and the Commission's Horizontal Guidelines[447], it is possible that efficiencies brought about by a merger counteract the effects on competition and in particular the potential harm to consumers that it might otherwise have. Parties to a concentration may thus detail the efficiency gains generated by the concentration that are likely to enhance the ability and the incentive of the merged entity to act pro-competitively for the benefit of consumers. Typical examples of such efficiencies include cost savings, new product introduction and service or product improvement. Efficiency claims need to be reasoned, quantified and supported by internal studies and documents if necessary. The parties have to demonstrate that such efficiencies are likely to benefit directly customers in the relevant markets where competition concerns have been indentified and could not have been achieved to a similar extent by means that are less anticompetitive than the proposed concentration.

(531) According to the Horizontal Guidelines, to declare compatible with the common market a transaction for which competition concerns have been identified, the Commission should be in a position to conclude that: *"the efficiencies generated by the merger are likely to enhance the ability and the incentive of the merger entity to act pro-competitively for the benefit of consumers, thereby counteracting the adverse effects on competition which the merger might have otherwise"*.

(532) In the Form CO, the parties indicated that the efficiencies brought about by the proposed transaction are attainable, quantifiable and transaction-specific, arising primarily from the close proximity of their respective mines/processing facilities in the Sudbury basin. According to the parties, Inco and Falconbridge have developed and operate significant assets in the Sudbury basin in Canada, and New Inco will be in a position to optimize the mining and processing, which will result in increased production at lower costs, on a sustainable basis and over the long term.

(533) Total efficiencies are estimated by the parties at USD 2.3 billion in net present value[448]. First, the creation of New Inco will lead to increased mine production and improved cost profile as well as accelerated and additional mine investment in the Canadian mining operations, as the result of the integration of mines and mills. Secondly, the flow

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445 Notably "Presentation to the European Commission, M.4000 – Inco / Falconbridge – Review of substantial, pro-competitive efficiencies" of 14 February 2006.

446 See Article 2(1)(b) and Recital 29.

447 Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 31, 5.2.2004, p.5.

448 In its reply to the Statement of Objections, Inco indicates that *"Inco has updated this estimate to reflect the current consensus on metal prices"* and that *"the current net present value of the efficiencies is estimated at approximately USD 2.8 BN"*.

of materials will be optimized so as to reduce transportation costs, increase the recovery of nickel and cobalt and increase production capacity for nickel and copper, resulting in a lower overall cost base of processing operations. Thirdly, the parties intend to realize cost savings by utilizing best pratices, optimizing work force level and procurement savings through economies of scale in the purchase of equipment, services and capital goods. Fourthly, unnecessary costs are planned to be eliminated on duplicative functions performed separately by the parties.

(534) The parties further argue that the efficiencies that would be brought about by the proposed transaction cannot be obtained by any alternative transaction and would not be achieved by the parties individually in the absence of the merger. A large part of the efficiencies relate to the combined entity ability to shift production of mined ores and processed intermediates to the most appropriate/efficient facilities, which could not occur if they continued as separately-owned assets.

(535) Finally, the parties state that, as the result of the global competition in the supply of nickel, efficiencies that result in an output expansion by the combined entity are likely to be passed on to the direct benefit of consumers.

(536) The Commission has reviewed the internal studies prepared by the parties as regards these efficiency claims and concluded that, while the efficiencies presented by the parties are quantified and well-supported by several studies prepared by Inco and are likely to effectively materialize, the parties did not demonstrate to the requisite standards that the efficiencies could not have been achieved by other means and would directly benefit end customers in the markets where competition concerns have been identified so as to offset the identified competition concerns.

Merger specificity

(537) As regards the merger specificity, according to the Horizontal Guidelines, *"efficiencies are relevant to the competitive assessment when they are a direct consequence of the notified merger and cannot be achieved to a similar extent by less anticompetitive alternatives"*.

(538) The Commission has analyzed a number of Inco internal documents that envisage several options as regards Falconbridge, including a joint venture in the Sudbury basin, a merger of equals and the acquisition of Falconbridge by Inco, and evaluate the pros and cons of these options. As regards efficiencies, a document[449] indicates that a joint venture in the Sudbury basin would allow to *"capture much of potential for operating synergies (but not corporate or tax)"*. The same document however indicates that the synergies *"would have to be shared with Falconbridge"*, which was regarded as a drawback for Inco's shareholders. The presentation does not indicate that the two other options would create more synergies but explains that synergies would have to be "pre-paid" by the deal premium in the case of an acquisition. The statements in this document thus put into question the parties' claim that the efficiencies of the proposed transaction could not have been reached by other means.

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[449] […]*.

(539) In its reply to the Statement of Objections[450], Inco indicates that *"Inco reduced the value of the efficiencies it presented to the Commission by the value that it believes could be generated with a commercial, arms-length agreement between itself and Falconbridge, such as a joint venture. Therefore the Transaction's original estimated net present value of USD 2.3 BN in efficiencies already take into account the potential efficiencies that could be generated via other methods"*. However, none of the parties' submissions that deal with efficiencies have explicitly broken down such estimates according to the means by which they would be achieved. The Commission notes that the Inco internal document presented above does not mention that the synergies are calculated as the difference between the level of efficiencies obtained through a merger and the level of efficiencies obtained through a Sudbury joint venture. The Commission therefore considers that this net present value represents the total synergies expected from the proposed transaction and not the difference between this total and the synergies that could have been achieved through other means. The parties' argument must thus be rejected.

(540) In addition, […]*.

(541) While the fact that Inco and Falconbridge have been mining and processing the same ore bodies for a number of years without seizing the opportunity to create a joint venture supports the parties' claim that the creation of such joint venture is complex from a commercial and financial viewpoint, the Commission notes that joint ventures between undertakings are common in nickel mining and processing. These joint ventures seek precisely to share the financing, the risks and the benefits of the mining projects between two or more undertakings, depending on their respective economic and strategic interests. The nickel intermediates production from such ventures may be allocated to the parties to the joint ventures which can refine these intermediates independently and compete for the marketing and the sale of finished nickel products (e.g., Inco's joint venture with Sumitomo in Indonesia, PT Inco, and Inco's joint-venture with Sumitomo and Mitsui to develop the Goro project in New Caledonia). While setting up a joint venture between Inco and Falconbridge for the mining and processing of nickel in the Sudbury basin may entail complex commercial and financial considerations, the Commission considers that the parties have nonetheless failed to demonstrate to the requisite standard that such a joint venture is not a conceivable and realistic alternative for the achievement of the efficiencies sought. Furthermore, it is unlikely that the administrative and contractual difficulties entailed by the creation of such a joint venture would be of such magnitude as to offset the significant operating synergies such a joint venture would bring about.

(542) The Commission also considers that the creation of such joint venture would have a lesser impact on competition in the markets for the supply of finished nickel and cobalt products than the proposed transaction. As recognized by the parties, the largest share of the operating synergies of the proposed transaction is expected to be achieved at the mining and processing stages of the nickel production chain. A joint venture between Inco and Falconbridge in the Sudbury basin, as envisaged in the Inco internal document, would not comprise all of Inco's and Falconbridge's mining and processing assets (it

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450 "Response to Statement of Objections Concerning Efficiencies", submission of Inco of 22 May 2006.

would not cover Inco's Voisey's Bay mine for instance) and would not prevent Inco and Falconbridge from competing at the refining and marketing level, while allowing for most of the operating synergies between the two companies to be realized. In view of the above, it can be reasonably assumed that the creation of such a joint venture would allow the parties to capture much of the potential for synergies while being a less anti-competitive outcome than a full merger between Inco and Falconbridge.

Benefit to consumers

(543) As regards the benefit to consumers, the parties do not provide any explanation as to why the claimed efficiencies would be passed on to end users and simply state that this would be the case in view of the competition on the market for the supply of nickel. In particular, the parties did not state nor argue that the efficiencies would benefit directly the end customers active in the three product markets where competition concerns have been identified.

(544) In its response to the Statement of Objections, Inco indicates that the efficiencies will enable New Inco to become a more efficient company, with lower production costs, with the ability to lower prices and to strongly compete with other nickel producers. The Commission agrees that the proposed transaction is likely to lower New Inco's cost base due to synergies in mining and processing. However, the Commission considers that the efficiencies will not meaningfully benefit to customers for end-nickel products in the relevant markets where competition concerns have been identified as these efficiencies are expected to be achieved at the upstream mining and processing level only (not at the final stage of the nickel production chain), and any potential benefit will be spread between all finished nickel and cobalt products of New Inco, a significant part of which are sold on other markets than the three relevant markets where competition concerns have been identified.

(545) Furthermore, the Commission takes the view that it is unlikely that New Inco will have sufficient incentives to pass on these efficiency gains to the relevant end customers due to the characteristics of the three relevant markets where competition concerns arise. The general principles exposed in the Horizontal Guidelines for the Commission to assess efficiencies clearly indicate that "*the incentive on the part of the merged entity to pass efficiency gains on to consumers is often related to the existence of competitive pressure from the remaining firms in the market and from potential entry"*. It is further indicated that *"It is highly unlikely that a merger leading to a market position approaching that of a monopoly, or leading to a similar level of market power, can be declared compatible with the common market on the ground that efficiency gains would be sufficient to counteract its potential anti-competitive effects"*.

(546) As presented in Section VI, as a result of the proposed transaction, New Inco will acquire an almost monopolistic situation on the markets for the supply of nickel to the plating and electroforming industry, for the supply of high purity nickel for super alloys/super alloys used in safety critical parts, and for the supply of high purity cobalt for super alloys used in safety critical parts. The very low level of competitive constraints on New Inco in these markets is also due to the high inelasticity of demand for high purity nickel and cobalt, for which super alloy customers have very limited alternatives, and to the high barriers to entry on these markets. These characteristics further reduce New Inco's incentives to share the benefits of the efficiencies with the

end customers on these three relevant markets. Finally, New Inco's nickel production is constrained by the capacity of its existing facilities and the large capital costs to increase production capacities, thereby restricting New Inco's ability to expand output, which could have benefited certain end customers.

(547) In view of the above and in particular in the broader context of the overall competitive assessment of the proposed transaction, the Commission has concluded that the significant impediment to competition likely to be brought about by the proposed transaction on these three relevant markets will not be offset to any meaningful extent by potential benefits to end customers in these markets deriving from the efficiencies brought about by the proposed transaction.

(548) Finally, the additional mining production included in the efficiencies is also too limited ([…]* MT over 6 years, accounting for less than [0-3%]* of projected global mining production over the period) to have any influence on LME prices and hence to benefit directly end users.

(549) In its response to the Statement of Objections, Inco submits that the Commission understates the increase in nickel production due to a *"fallacious comparison"*. It has to be pointed out that the Commission did carry out a proper comparison. On the contrary, Inco misrepresents the significance of the increased production by aggregating the production increase over six years and comparing it with the global production of only one year (2005). In addition, Inco itself confirmed the Commission's figures during the Hearing: […]*[451]. This estimate coincides up to the rounding error with the Commission's estimate of [0-10%]* annual increased production (measured as an average over the next six years). Hence, there is no reason for the Commission to deviate from its assessment in the Statement of Objections.

(550) In conclusion, the parties have failed to demonstrate that the efficiencies brought about by the proposed transaction are not attainable by a less anti-competitive alternative and would directly benefit end customers in the three relevant product markets where competition concerns have been identified. For these reasons, the Commission considers that the efficiencies presented by the parties cannot be considered to offset the adverse effect of the proposed transaction on competition.

VII. ASSESSMENT OF THE COMMITMENTS

Procedure

(551) In order to remove the competition concerns described above, on 16 March 2006[452], the parties submitted a remedy package consisting in the sale of Falconbridge's Nikkelverk refinery and related assets, as described more fully in recitals (558) to (572) ("the Divested Business"). In addition, the parties offered to grant the purchaser of the

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451 Presentation "Overview of the transaction", page 11, Inco, 29 May 2006.

452 "Remedy Package", Submission of Inco of 16 March 2006.

Divested Business an option to conclude a flexible long-term agreement to supply feed to Nikkelverk, for up to ten years.

(552) On 30 March 2006[453], the parties submitted a revised remedy package to reflect some of the issues raised in the discussion with the Commission. After further contacts with the Commission, on 5 April 2006[454], the parties submitted a revised remedy package offering notably to divest Falconbridge International Limited ("FIL"), the Falconbridge entity that that handles feed procurement for Nikkelverk and is the immediate party to the third-party feed supply agreements.

(553) The Commission launched a market test on the remedy package of 5 April 2006 in order to assist it in its assessment of the ability of the proposal to preserve effective competition.

(554) The parties submitted revised commitments on 24 April 2006[455] in which they offered to include an option for the purchaser of the Divested Business[456] to extend the duration of the long-term feed supply agreement from 10 to 15 years for certain volumes.

(555) On 8 May 2006, the Commission sent Inco a Statement of Objections, in which it considered that the commitments were insufficient to eliminate the competitive concerns raised by the proposed transaction, in particular due to the uncertainties as regards the feed supply of the Divested Business if it were not part of an integrated mining group.

(556) On 7, 12, 14, 16 and 26 June 2006, the parties submitted revised commitments. In the final commitments submitted by the parties on 26 June 2006 set out in Annex V ("the Commitments), they undertake to sell the Divested Business to a company active in the metals mining and/or processing business with the ability to supply sufficient nickel intermediate products to sustain the economic viability of Divested Business

(557) In addition, on 7 June 2006, Falconbridge entered into a binding agreement with LionOre Mining International Limited ("LionOre") for the sale of the Divested Business. On 7 June 2006, the parties requested the Commission to approve LionOre as a suitable purchaser for the Divested Business[457]. Inco has also joined this agreement as a party so as to be entitled to rely on and enforce the obligations of the acquirer LionOre, given its interest in this agreement in order to obtain the regulatory approvals to its proposed merger with Falconbridge. This share purchase agreement was amended on 16 June 2006. The share purchase agreement concluded on 7 June 2006 and the amending agreement of 16 June 2006 are hereafter referred to as the "Share Purchase Agreement".

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453 Letter of Inco to the Commission of 29 March 2006.

454 Letter of Inco to the Commission of 5 April 2006.

455 Letter of Inco to the Commission of 24 April 2006.

456 If such purchaser is not active in nickel mining.

457 Letter of Inco to the Commission of 7 June 2006.

Description of the Commitments

(558) Under the Commitments, the parties undertake to divest Falconbridge's Nikkelverk refinery in Norway, together with the related feed procurement entity and existing third-party feed supply agreements, related marketing organizations and existing customer contracts, Falconbridge's proprietary refining technology and trademarks to a suitable purchaser ("the Purchaser"), having access to sufficient feed resources to sustain the economic viability of Nikkelverk. In addition, the parties undertake to offer the Purchaser an option to enter into a 10-year flexible feed supply agreement, covering a substantial part of Nikkelverk's feed requirements.

Description of the Divested Business

Nikkelverk refinery

(559) Nikkelverk is Falconbridge's sole nickel refinery in Europe. It is located in Kristiansand, Norway, and has been in operation since 1910. It was acquired by Falconbridge in 1929 and currently has about 460 employees. The refinery has through the years been upgraded and expanded and is currently one of the few large nickel refineries in the world. Within the Falconbridge group, Nikkelverk has operated as a toll refining entity, receiving a range of intermediate products initially produced or purchased by Falconbridge which are in turn refined at Nikkelverk and then transferred to other Falconbridge entities for onward sale to customers.

(560) The Nikkelverk refinery is capable of refining up to approximately 85,000 MT of finished nickel annually, a large part of its production being sold to the plating and electroforming industry and to super alloy producers. Nikkelverk is also able to refine up to 5,200 MT of finished cobalt annually, a significant part of its production being sold to super alloy producers. The refinery also produces up to 40,000 MT of refined copper annually, sulphuric acid and various amounts of gold, silver, platinum, palladium, rhodium, and other PGM concentrates. Falconbridge's sales of finished nickel products and finished cobalt products produced at Nikkelverk amounted to respectively around USD 1.25 billion and USD 124 million in 2005[458].

(561) The Nikkelverk refinery uses a chlorine leaching process that was developed by Falconbridge and introduced at Nikkelverk in 1975. Through this process, the refinery is able to process complex nickel-copper-cobalt precious metal feeds with high recoveries of metals. The final stage of the refining process is an electro-winning stage.

(562) Inco undertakes to divest Falconbridge Nikkelverk A/S ("FNA"), the Falconbridge subsidiary owning the Nikkelverk refinery, including FNA personnel responsible for the operation of the refinery, as part of the Divested Business.

Feed sourcing

Third-party feed supply agreements

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458 "Remedy Package", Submission of Inco of 15 March 2006.

(563) Nikkelverk currently receives about […]* % of its feed from several independent third parties under separate agreements, which expire between 2007 and 2015[459] ("third-party feed supply agreements"). As indicated above, the Falconbridge subsidiary that handles feed procurement for Nikkelverk and is the immediate party to the third-party feed supply agreements is FIL. Inco undertakes to divest FIL as part of the Divested Business, including FIL personnel responsible for the procurement of third-party feeds for Nikkelverk.

Long-term feed supply agreement with New Inco

(564) The parties undertake to offer the Purchaser the possibility to enter into a long-term supply agreement with New Inco for the supply of feed for the refinery ("Matte Supply Agreement"). Under the Matte Supply Agreement, New Inco will supply nickel matte to the Divested Business for a period of up to 10 years in an amount equivalent to at least the amount Falconbridge projected it would supply Nikkelverk during that period.

(565) Under the Matte Supply Agreement, New Inco will supply between 55,000 MT and 56,000 MT per year of nickel matte. In addition, the parties undertake to give each year the Purchaser the option to purchase additional 5,000 MT of nickel matte over an initial five-year period. The Purchaser will be required to give notice to New Inco at least 12 months prior to the beginning of the applicable contract year if it intends to exercise this annual option.

(566) The Matte Supply Agreement includes agreed-upon specifications for the nickel matte (impurities levels, metal content, etc.) with standard penalties payable by New Inco if these specifications are not respected. In particular, the matte to be supplied by New Inco under the Matte Supply Agreement will have a specified cobalt content so that the quantities of cobalt feed supplied to the Purchaser will be equivalent to the quantities currently supplied by Falconbridge to Nikkelverk (around 2,000 MT).

(567) The parties undertake to grant the Purchaser some flexibility to reduce the quantities of nickel matte supplied by New Inco under the Matte Supply Agreement as follows:

(i) For the first three years of the Matte Supply Agreement, the Purchaser will be required to purchase the full quantities of nickel matte specified in the Matte Supply Agreement under the terms provided therein.

(ii) Upon at least three years' prior notice given by the Purchaser, the Purchaser may elect to reduce the quantities of nickel matte specified for purchase under the agreement by (i) up to 50% in years four and five of the Matte Supply Agreement, and (ii) up to 100% in years six through ten of the Matte Supply Agreement, conditional on the fact that, once the Purchaser exercises its option to reduce by 100% for any of years six through nine, the balance for the remaining years until the expiration of the Matte Supply Agreement can only be increased to a level that is 50% of the maximum (*i.e.*, 27,500 MT).

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[459] The duration of some of the third-party feed supply agreements is for the life of the mines and their expiration date is therefore not precisely known.

(iii) In addition, the Purchaser will have the right to reduce its matte purchases by smaller amounts under shorter notice periods, in accordance with the following provisions:

- For each of years four through ten, the Purchaser would have an option to reduce the quantities to be purchased by up to 5,000 MT of nickel-in-matte (in increments of 1,000 MT), subject to pro-ration in the case of year ten, upon at least one year's prior notice; or

- For each of years six through ten, the Purchaser would have an option to reduce the quantities to be purchased by up to 10,000 MT of nickel-in-matte (in increments of 1,000 MT), subject to pro-ration in the case of year ten, upon at least two years' prior notice.

(568) The price paid by the Purchaser for the nickel matte under the Matte Supply Agreement will be calculated as follows. The commercially recoverable/refined quantities of nickel and any other metals will be priced based upon benchmark (LME or equivalent for nickel, Metal Bulletin free market price for 99.3% purity for cobalt, etc.) market prices. The quantities of metals paid for by the Purchaser will be based upon agreed-upon recovery rates, not exceeding the actual refinery's recovery rates. In addition, the Purchaser will receive a credit for its refining costs consistent with that received by other independent refiners to produce refined nickel and other metals plus an agreed-upon margin on these costs. These costs will be subject to an annual inflation factor reflecting the evolution of Nikkelverk's cost factors.

Technology

(569) Falconbridge's proprietary refining technology (in particular the chlorine leaching process) is part of the Divested Business.

Sales and Marketing

(570) The Divested Business includes the Falconbridge sales and marketing organizations that are responsible for selling the output of Nikkelverk. The Falconbridge sales groups that are included in the Divested Business comprise three decentralized sales offices located in Brussels, Pittsburgh, and Tokyo. Each of these offices is a separate corporate entity:

- Falconbridge Europe S.A. (Brussels) ("FESA"), which employs 16 people and is responsible for sales in Europe, Africa, the Middle East, and India;

- Falconbridge (Japan) Ltd. (Tokyo) ("FJKK"), which employs 8 people and is responsible for sales in the Far East; and

- Falconbridge U.S., Inc. (Pittsburgh) ("FUS"), which employs 12 people and is responsible for sales in the North, South, and Central American markets.

(571) The Divested Business also includes all existing customer contracts related to metal products produced at Nikkelverk. The refinery supplies over 200 customers, over 85% of which are supplied under rolling supply contracts.

Trademarks

(572) The trademark and brand names owned by Falconbridge and covering the products produced at Nikkelverk is part of the Divested Business. Inco will also allow the Divested Business to use the Falconbridge name as part of its corporate name for a period of up to 18 months from the completion of the sale of the Divested Business.

Purchaser requirements

(573) The Commitments include the standard requirements that the Purchaser (i) be independent of and unconnected to the parties, (ii) have the financial resources, proven expertise and incentive to maintain and develop the Divested Business as an economically viable and active competitive force and (iii) neither be likely to create prima facie competition concerns nor give rise to any significant risk that implementation of the Commitments will be delayed.

(574) In addition, the parties undertake to sell the Divested Business to a company active in the metals mining and/or processing business […]*.

Safeguard for the implementation of the Divestment

(575) It follows from the above considerations that the identity of the Purchaser […]* is crucial to ensure that the Divested Business will result in a viable competitor which will be able to effectively compete on a lasting basis in the markets where competitions concerns were identified.

(576) Given the fact that the pool of suitable purchasers is limited, in order to limit the risk that no suitable purchaser could be identified and ensure the implementation of their divestment commitment, the parties undertake not to implement their merger prior to closing (i.e., the transfer of the legal title of the Divested Business to the Purchaser). This commitment does not prevent Inco from purchasing Falconbridge shares pursuant to its offer and completing the proposed concentration prior to the closing of the divestment sale, but Inco shall not integrate Falconbridge's operations or vote its acquired shares in Falconbridge prior to the closing of the divestment sale. The parties undertake that the closing will, in any event, take place within a period not exceeding 3 months after the approval by the Commission of the Purchaser and the terms of sale.

Assessment of the Commitments

Introduction

(577) As explained in the Commission notice on remedies[460], under the Merger Regulation, the Commission assesses the compatibility of a notified concentration with the common market. Where a concentration raises competition concerns as it could lead to effective competition being significantly impeded in the common market, the parties may seek to modify the concentration in order to resolve the competition concerns and thereby gain

[460] Commission Notice on remedies acceptable under Council Regulation (EEC) No 4064/89 and under Commission Regulation (EC) No 447/98, OJ C 68, 2.3.2001, p. 3.

clearance of the merger. In assessing whether or not the remedy will preserve effective competition, the Commission considers the type, scale and scope of the remedies by reference to the structure and particular characteristics of the markets in which competition concerns arise.

(578) In the present case, the aim of the remedy package is to ensure, post merger, the presence of a viable competitor to New Inco on the relevant markets, i.e. the markets for the supply of nickel to the plating and electroforming industry and for the production of high purity nickel for super alloys and for the supply of high purity cobalt for the production of super alloys used in safety critical parts. The remedy package needs to address the competition concerns identified on the relevant markets over the long term. The competitive assessment of the proposed transaction has indeed highlighted that the nickel industry was characterized by very long lead time. In particular, the market investigation has established that there are high barriers to entry on the relevant markets and that there has been no market entry on these markets in the past ten years.

(579) In its reply to the Statement of Objections[461], Inco states that *"The Commission may require assurance as to the viability of the divested business only for as long as substantive concerns identified may reasonably be expected to endure"* and further states that *"There is no basis for concluding that the identified substantive concerns will persist for seven years, ten years or longer"*, as *"there are no barriers to entry in any of the three relevant markets"*.

(580) The Commission strongly opposes the parties' view that competition concerns may only be temporary as barriers to entry are inexistent. On the contrary, the Commission's market investigation has revealed the existence of high barriers to entry and the lack of entry over a long period of time for each of the relevant markets where competition concerns have been identified.

(581) The Commission takes the view that the proposed remedy package as it stands provides sufficient guarantees on both the viability and the competitiveness of the Divested Business. The Commission's market investigation has shown that the Divested Business viability and competitiveness would be threatened if it were not part of a group active in nickel mining and/or processing that would ensure the Divested Business access to suitable feed in sufficient quantities. The Commitments which provide that the Divested Business will be sold to a company active in the metals mining and/or processing with sufficient feed resources to sustain the economic viability of the Divested Business removes these concerns as regards access to feed and ensure the viability and competitiveness of the Divested Business.

(582) For the purposes of the present Decision, the Commission's assessment of the proposed remedy package will first deal with the current structure of the nickel mining, processing and refining industry and show that vertical integration is essential. The viability of the Divested Business and its ability and incentive to act as a competitive force on the relevant markets will then be discussed, with a focus on the availability of feed.

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[461] "Response to Statement of Objections Concerning the Remedy Proposal", submission of Inco of 22 May 2006.

Structure of the nickel mining, processing and refining industry

(583) The proposed remedy package consists of a nickel refinery, which refines nickel intermediate products (nickel matte, nickel sulphide, nickel hydroxide, etc.) into finished nickel products (nickel full plate cathodes, nickel squares, pellets, etc.) that are sold to distributors or industrial end users. As detailed above the refining stage is only the final stage of the nickel production chain, the first stage being the mining of the ore and the second the processing of the ore/concentrate into nickel intermediate products.

(584) During its assessment of the viability and the competitiveness of the Divested Business, the Commission reviewed the current structure of the nickel industry, in particular the business model of its market players and its degree of vertical integration. The Commission takes the view that the analysis of the current market structure (and its evolution) is relevant to assess the suitability of the proposed remedy.

Degree of vertical integration

(585) Among the four main suppliers of nickel for plating and electroforming active in the EEA (Falconbridge, Inco, OMG and Eramet) and the three main suppliers of nickel for super alloys (Inco, Falconbridge and Eramet), Inco, Falconbridge and Eramet are fully or to a large extent vertically-integrated with own mines and processing plants. This is also true in the nickel industry in general, where only three market players (OMG, Jinchuan and Sumitomo) are partially vertically-integrated, while the largest players are active at all stages of the nickel production chain (Norilsk, Inco, BHP Billiton, Anglo American, Falconbridge, Eramet). It is also worth noting that there is no stand-alone nickel refinery in the nickel industry, except the small Empress refinery in Zimbabwe which toll-refines nickel for the company Centametall.

(586) In terms of volume of intermediate feedstock traded between third parties, the parties have provided a list of all supply agreements of nickel intermediates between independent operators in the Form CO[462], based on CRU Nickel Quarterly, July 2005. According to this list, the total volumes of nickel intermediates traded between third parties amounted to [100,000 – 160,000]* MT in 2004 and [100,000 – 160,000]* MT in 2005[463], or respectively [10-15%]* and [10-15%]* of global primary nickel production. Trade of nickel intermediate products is thus limited in volume and only accounts for a limited share of total primary nickel production.

(587) In its reply to the Statement of Objections[464], Inco submits that the Commission understated the volume of nickel intermediates traded between third parties and estimates that third-party feed accounts for […]* % of total nickel supply. The Commission underlines that its estimate is based on the data provided by Inco in the

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462 Form CO, p. 205.

463 These figures include some double counting as nickel intermediate products may be sold at two levels: concentrates are sold from the mine to the processing plant and other products are sold from the processing plant to the refinery.

464 "Nikkelverk : A Non-Integrated Refining and Marketing Business", submission of […]* and Inco, 22 May 2006.

Form CO, themselves based on the CRU Quarterly report and, in view of the list of third-party feed agreements provided in Inco's reply to the Statement of Objections, believes that the […]*% figure includes some double counting and transactions between affiliated companies.

(588) The parties contest that vertical integration is the business model currently prevailing in the nickel industry: *"A wide variety of business models are pursued in the mining and metals industry with certain competitors based on a vertically integrated model, and others based on a stand-alone refinery or stand-alone mining operations, and a wide range of structure in between"*[465]. The Commission's investigation has on the contrary established that the vertically integrated business model prevails currently in the industry[466].

(589) Similarly, Inco states that *"there is simply no basis for concluding that the viability or competitiveness of a refinery turns on whether that refinery is owned by an integrated mining company"* and submits that *"there are many examples in the global industry of independent non-integrated metals refining companies that have been and continue to be strong, profitable competitors"*[467]. However, Inco's allegations are clearly contradicted by the feed sourcing difficulties of OMG in 2005 and Jinchuan's and Sumitomo's strategy to acquire equity interests in mining activities due to the difficulty to source feed, as further detailed below.

(590) The parties mention Jinchuan, OMG and Sumitomo as non-vertically integrated refineries.

(591) OMG operates a nickel refinery in Harjavalta (Finland) and is only partially vertically integrated in mining and processing. As reported by CRU[468], despite the buoyant demand for nickel, OMG had to restrict its nickel refining activities in 2005 due to lack of feed. [...]*[469]. As a result of its feed sourcing difficulties, OMG entered into a toll-refining agreement with Inco on 31 January 2006. Under the agreement, OMG will toll-refine matte smelted by Boliden under a toll-smelting agreement with Inco over a 3 year period. This example clearly shows that even a refinery that is partially vertically integrated may experience feed sourcing difficulties and become a less viable and competitive market player in periods of tight supply of nickel intermediates.

(592) The Commission's investigation has revealed that Jinchuan and Sumitomo are already partially vertically-integrated in mining and devote significant efforts to developing their own feed sources. Sumitomo explains for instance that its strategy is to develop its

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465 "Response to preliminary feedback from the Commission's market test", submission of 21 April 2006.

466 The parties' argument that there are a number of non-vertically integrated players in other mining industries is irrelevant to the present assessment of the degree of vertical integration of the nickel industry.

467 "Response to Statement of Objections Concerning the Remedy Proposal", submission of Inco of 22 May 2006.

468 CRU Nickel Quarterly – January 2006 – Page 19.

469 [...]*.

mining assets to secure its feed supply: *"Sumitomo strategy is to establish Long-term contracts of purchasing nickel ore and intermediate products and to be the integrated refinery and smelter. For such purpose we have invested to Coral Bay in Philippine, PT INCO in Indonesia and Figesbal in New Caledonia. We always look for the chance to make new investments to the nickel projects for securing the sources for our refinery and smelter. However as you know, the mineral resources of nickel are unevenly distributed in the world. It is not easy"* [470].

(593) In its reply to the Statement of Objections[471], Inco analyses the evolution of the structure of the nickel industry and indicates that *"there are a significant and growing number of non- or partially integrated refineries"*. Inco provides additional historical information on four non- or partially integrated refineries, Jinchuan, Sumitomo, OMG and Sherritt. The Commission considers on the contrary that these examples clearly demonstrate the need for nickel refineries to secure long-term feed sources and show that refineries that are not part of an integrated mining company seek to recreate a "partial" vertical integration by acquiring equity interests in mining projects.

(594) Finally, as regards high purity nickel, in the reply to the Statement of Objections[472], Inco indicates that partially vertically-integrated refineries have been cited by customers as *"providing very high quality nickel in competition on the narrow markets of concern"*. The refineries listed are Sumitomo, OMG, Jinchuan, Empress and BHP Billiton Yabulu. However, the Commission underlines that none of these refineries produces high purity nickel for super alloys to a meaningful extent.

(595) In view of the above, it is clear that the prevailing model in the nickel industry is the vertical integration of mining, processing and refining activities. There are only three undertakings active in nickel refining which are partially vertically integrated and none of them produces high purity nickel products for super alloys. In view of limited scope and the current tightness of the markets for intermediate nickel products, sourcing sufficient feed volumes is difficult for partially vertically integrated refiners and the three undertakings own and develop interests in mining and processing operations to secure long term sources of feed.

Access to feed

(596) The Commission's market investigation has indicated that it is essential for a nickel refinery to ensure access to sufficient and suitable quantities of feed over the long term in order to be viable and competitive.

(597) Refining is a capital intensive industry and nickel refineries have significant fixed costs. The parties estimate the capital costs of building a […]*MT refinery to vary between USD […]* million and over USD […]* million, depending on the technology, the feed

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470 E-mail from Sumitomo to the Commission of 15 February 2006.

471 "Nikkelverk : A Non-Integrated Refining and Marketing Business", submission of […]*.

472 "Response to Statement of Objections Concerning the Remedy Proposal", submission of Inco of 22 May 2006.

and product specifications[473]. Due to the high capital and fixed costs[474], the total refining cost per metric ton of nickel produced varies significantly with the refinery's capacity utilization rate.

(598) High capacity utilization is thus crucial to the competitiveness of a nickel refinery. Refining operators need to secure their access to nickel intermediates over the long term, either through integration within a group with assets in mining and processing or through long-term or life-of-mine supply agreements with third parties active in mining and smelting. OMG's low capacity utilization in 2005 illustrates the vulnerability of partially vertically-integrated refining operators.

(599) In addition to the need to secure sufficient volumes of feed, the quality of the feed supply is important. Nickel intermediate products comprise a broad range of different products: nickel in matte, mixed sulphides, mixed hydroxides, etc. Even within each category of nickel intermediate products, the composition varies significantly in terms of nickel content and levels of other chemical elements, depending on the type of ore processed and the processing technology.

(600) Refineries are typically designed to refine a certain range of nickel intermediate products. The refining process comprises several stages aiming at removing certain impurities (iron for instance) and the equipment at each of these stages have a capacity constraint. As a result, if a refinery has to process a feed mix with a high content in a specific impurity (exceeding the refinery's existing equipment capacity), the refinery has to be adapted and additional capital investment made. For example, the parties indicate[475] that the treatment of nickel matte by Votorantim in Fortaleza, due to its high iron content, could require capital investments of USD […]* million at Nikkelverk to increase the iron removing capacity from […]* MT to […]* MT/year.

(601) To sum up, a nickel refinery is most efficient if it is operated at full capacity and processes over the long term a consistent and suitable feed mix. Nickel producers that are vertically-integrated can meet such requisites by ensuring that their entire production chain, and in particular the mining and processing operations, produces nickel intermediate products suitable for the refinery on a consistent basis.

(602) As regards high purity nickel, stable feed composition allowing stable processes and operations at the refinery constitutes a strong advantage to produce high purity nickel for super alloys. Vertical integration thus appears to be even more relevant for the production of high purity nickel, for which any variation in the feed mix may have negative consequences in terms of impurities levels of the refined nickel products.

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473 Form Co, p. 273.

474 [...]*.

475 "Response to the Commission's factual questions of March 30, 2006", Submission of Inco of 13 April 2006.

Conclusion

(603) Given the current market structure, vertical integration offers significant competitive advantages in the nickel industry, both in terms of access to suitable feed in sufficient quantities over the long term and in terms of ability to compete on the relevant markets. These two parameters are key to assessing the viability and the competitiveness of the Divested Business pursuant to the remedy package proposed by the parties.

Structure of the cobalt industry

(604) The Commission's market investigation has shown that the cobalt industry model is very much a non-integrated one, with most refineries currently operating under non-integrated or partially-integrated arrangements as regards their cobalt production. The integrated operations mostly represent those producers that extract cobalt as a by-product of nickel sulphide, nickel laterite and PGM processing as well as some copper based operations. Contrary to nickel, there is extensive trade of cobalt concentrate, cobalt intermediates and crude cobalt.

(605) There are many examples of non-integrated or partially integrated cobalt refineries. For example, two of the largest cobalt suppliers, OMG and Umicore, source all or the majority of their cobalt intermediates requirements from third parties. Jinchuan and Falconbridge have rapidly increased their cobalt refining capacity by securing additional sources of cobalt intermediates from third parties.

(606) OMG is the largest cobalt refiner in the world and produced 14% of total cobalt production in 2005. OMG obtains its feed from a variety of sources, with most obtained from third parties and only a minority as a by-product from OMG's nickel mining operations. OMG indicated that "*the strategy of OMG relating to exploration and access to cobalt ores and intermediates - OMG is not a mining company relative to cobalt and as such are always looking for access (purchases) of intermediates or high grade ores. These can come either as primary cobalt or by-product by Nickel or Copper production.*"[476] "*Potential sources of feed – this is not a problem for us as this is the way that operate today… could source from Inco, Phelps Dodge, variety of Congo sources (…) – bottom line is that there is feed available today.*"[477]

(607) Umicore is a major producer of cobalt in the form of powders, oxides, salts and other compounds. Umicore is a non-integrated producer, which is not active in mining and only purchases feed material from third parties[478].

(608) Jinchuan and other Chinese producers have expanded their annual cobalt production from roughly 1,200 MT in 2000 to over 12,000 MT in 2005, largely on the basis of an increase in the processing of third-party feed[479].

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[476] OMG's response to question 60 of the request for information of 31 January 2006.

[477] OMG's response to question 66 of the request for information of 31 January 2006.

[478] Umicore's response to questions 60 and 66 of the request for information of 31 January 2006.

[479] Cobalt News, April 2006, 2005 Production Statistics, p. 3.

(609) For these reasons, the Commission did not raise the issue of the ability of the Divested Business to source sufficient and suitable third-party cobalt feed in its Statement of Objections, and the future availability of cobalt feed is not further discussed below.

Availability of nickel feed

(610) The Commission's market investigation has shown that the essential issue as regards the long-term viability of the Divested Business is whether or not it will be in a position to secure sufficient nickel feed sources to run the refinery at a high capacity utilization rate[480] after the expiry of the Matte Supply Agreement.

Introduction

(611) The Matte Supply Agreement aims at ensuring feed to the Divested Business at least at the level that would have been provided by Falconbridge over the relevant period absent the proposed transaction. The Commission has estimated in the table below the quantities of feed covered by the Matte Supply Agreement, including the contractual volume and the optional volume during the first five years of the agreement[481]. In addition, the Commission has estimated the contractual quantities of contained nickel to be supplied by BCL[482] until the end of the mine life, currently projected to be 2012.

(612) While Nikkelverk will have sufficient quantities to run at a high capacity utilization rate[483] until 2012, […]*. The issue of availability of sufficient quantities of feed is thus relevant from 2013 and in 2016 the Divested Business will lose all its existing feed supply.

(613) As evidenced above, feed sourcing is a crucial issue for a refinery, in particular because of the under-development and tightness of the markets for nickel intermediate products. In principle, there are three ways for the Divested Business to address its feed needs in the long term: (i) purchase of the Divested Business by an operator with assets in mining operations producing suitable feed; (ii) re-creation of a vertical integration, through investment and development of mines by the purchaser of the Divested Business; and/or (iii) purchase of matte or other suitable feed on the market, independently of New Inco. The Commission's investigation has shown that only the first option (i) is likely to provide sufficient guarantees as regards the availability of feed resources for the Divested Business.

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480 European nickel refineries experienced high utilization rate between 2002 and 2004 (in the range of 80%-85%). Source: Form CO, p 209.

481 It should be noted that the quantities to be supplied in the years 2006 and 2016 have to be adjusted on a pro-rata basis, depending on the start date of the Matte Supply Agreement with New Inco.

482 [...]*.

483 Nikkelverk nickel production capacity is 85,000 MT/year.

Re-creation of vertical integration: development of mining activities

(614) The market investigation has revealed that re-creation of vertically integrated operations by the Divested Business is unlikely to succeed by the expiry of the Matte Supply Agreement.

(615) Most respondents to the market investigation underlined that the timeframe to develop greenfield mining operations is around ten years, while the Divested Business will need to replace a substantial share of its feed supply after only seven years. Moreover, the time schedule to develop a greenfield mining project is subject to a number of uncertainties and previous experience has shown that the start-up date is often delayed. The likelihood that the Divested Business may be able to develop a new greenfield mining project covering a substantial share of its feed requirement is hence limited.

(616) According to Inco, once a greenfield project has been identified, it is developed through the four stages: scoping study, pre-feasibility study, feasibility study and execution. Inco[484] estimates the duration of such mining project as follows for a sulphide project: scoping study ([…]*), preliminary feasibility study ([…]*), feasibility ([…]*) and execution ([…]*), which means a total project duration ranging between […]*. As regards a laterite mining project[485], the estimated duration is as follows: scoping study ([…]*), preliminary feasibility study ([…]*), feasibility ([…]*) and execution ([…]*), which means a total project duration ranging between […]*. In an integrated mining and processing facility, the execution stages comprises the engineering work, the procurement, the site construction, the module fabrication and the commissioning.

(617) The Commission believes that such estimates are conservative as they do not comprise the exploration phase and the frequent delays in mining projects. Inco's internal documents show that a more realistic timeframe is about […]* years[486]. Most respondents to the market investigation confirmed that it was not likely that the Divested Business could develop mining and processing operations in the relevant timeframe. According to a market player[487]: *"New mining projects require 8-10 years to bring them on-stream after* confirming *suitable feed reserves. Mines are substantial long-term capital projects"*. Glencore also estimates that 15 years would be required to *"give Nikkelverk enough time to plan and commission a greenfield project which would be able to replace the proposed matte supply"*[488]. A market player[489] states that: *"It will take at least 10 years to develop new non-Inco sources of adequate feedstock"*.

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484 Inco's response to the Commission's request for information of 24 March 2006.

485 70% of mining projects expected to come on stream in the next 5 years are laterite projects.

486 "Nickel: Supply for the next ten years", presentation of Inco of 30 November 2004.

487 A market player's response to the Commission request for information of 7 April 2006.

488 Glencore's response to the Commission request for information of 7 April 2006.

489 A market player's response to the Commission request for information of 7 April 2006.

(618) Moreover, the development of mining projects is very capital intensive and technically challenging. It is therefore unlikely that the Divested Business, as a stand alone refinery, would have sufficient financial resources and technical expertise to develop a mining project without the support of an integrated mining group. [...]*[490].

(619) In view of the above, the Commission concludes that it is unlikely that the Divested Business will be able to develop new mining projects covering a large share of its feed requirements before 2013.

Purchase of feed on the market: long-term availability of third-party feed

(620) The Commission's assessment has shown that there is non-negligible risk that the Divested Business may not be in a position to purchase sufficient quantities of matte or other suitable feed on the market, independently of New Inco, after the expiry of the Matte Supply Agreement with New Inco. The market investigation has shown that there is no real market for the supply of intermediate nickel products to date and the availability of such intermediates for third parties is very limited. The situation is not expected to improve by the expiry of the Matte Supply Agreement.

The market for the supply of third-party feed is currently very tight

(621) The current structure of the nickel industry presented above shows that the vast majority of nickel intermediate products are used internally by vertically-integrated groups. There is thus no real market for the supply of third-party feed. In addition, the markets for the supply of nickel are currently very tight, as evidenced by the very high nickel prices since January 2004, and the markets for the supply of nickel intermediate products are even tighter.

(622) The current tightness of the market for the supply of feed is underlined by both OMG and Sumitomo, which commented on their current difficulty in sourcing third-party feed. Sumitomo[491] confirmed that the availability of nickel intermediate products is limited: *"In the* world*, nickel intermediate products sold in market are very small and limited. And most of such products are supplied by long term contracts. It is very difficult to find and secure new supplies for our refinery"*.

(623) The current tightness of the nickel markets is discussed in a number of Inco's and Falconbridge's internal documents.

Inco[492]: *"The nickel supply is short not just because of robust demand but also because of unrealized expectations of large nickel production from the Australian acid leach projects in the late 1990s, which led to five years of under-investment in new*

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[490] [...]*.

[491] Sumitomo's response to the request for information of 23 March 2006.

[492] Speech by Peter C. Jones President and Chief Operating Officer of Inco, of 17 September 2004.

supply. Only two nickel projects as large as Inco's planned Goro development have been built in the last 12 years."

Inco[493]: *"Canada's Inco said on Wednesday it sees a yearly world supply shortfall of 50,000 tonnes of nickel from now till 2009 due to limited supply and strong demand from China, supporting prices of the metal."*

Inco[494]: *"the nickel market will remain strong and nickel supply will be limited for some years to come."*

(624) The parties also recognise that refinery feed is currently tight and there is an excess of refining capacity over processing plant capacity:

[…]*[495].

[…]*[496].

(625) As a result, the competition between partially vertically-integrated refineries for third-party feed is very strong and some refineries are experiencing difficulties in sourcing feed on acceptable pricing conditions[497].

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493 "Inco sees world nickel supply shortfall till 2009", Reuters News of 12 October 2005.

494 Speech of Peter Jones, President and Chief Operating Officer of Inco at the Scotia Capital Materials Conference, of 1 June 2005.

495 Letter of Inco to the Commission of 21 April 2006.

496 Letter of Inco to the Commission of 21 April 2006.

497 [...]*.

The market for the supply of third-party feed is likely to remain limited until 2015

(626) The Commission's assessment of the remedy package proposed by the parties has focused on the availability of third-party feed for the Divested Business after 2015. To assess the likely market conditions at this date, the Commission has based its analysis on information provided by the parties in the course of the procedure, on Inco's and Falconbridge's own internal documents discussing the availability of feed for the years to come and on information and market data available in analysts' reports or provided by third parties in the context of the market investigation.

(627) In the course of the procedure, the parties submitted several memoranda on the development of new nickel mines by 2015 and contended that there will be abundant feed supply on the market. The parties also identified existing mines and mining projects that would be sufficiently likely and advanced and may constitute a source of suitable feed for the Nikkelverk refinery. According to the parties, these sources would offer sufficient alternative sources of suitable feed for Nikkelverk within the timeframe envisaged. The parties also provided information on the investment costs to adapt the Nikkelverk refinery to new feed sources if the new feed is not nickel matte or is matte with different impurities or a different proportion of impurities. The parties also alleged that, by 2015, upstream intermediate production capacity is likely to exceed refining capacity by a significant amount.

(628) On the contrary, the Commission's investigation has revealed that a number of mining projects may be delayed or that the mine operators may decide to refine internally the intermediate products from these mines. Assessment of each of the existing mines or likely mining projects identified by the parties as producing feed available and suitable for Nikkelverk has also shown that there was a high degree of uncertainty as regards both the availability and the suitability of such feed. Finally, the Commission's assessment of nickel intermediate production capacity and refining capacity in 2015 has shown that the current tight market situation of nickel intermediates is likely to be prolonged.

(629) In its reply to the Statement of Objections[498], Inco contests the validity of the Commission's assessment and indicates that the Commission does not adduce evidence to contradict the parties' views that sufficient nickel intermediates will be available to Nikkelverk after expiry of the Matte Supply Agreement with New Inco. Furthermore, Inco claims that the Commission discounted the evidence provided on the mere ground that it does not provide absolute certainty as to market developments several years into the future, which cannot be the appropriate legal standard.

(630) The Commission disagrees with Inco's contentions. The Commission's assessment of the remedies is based on the extensive market investigation carried out with a broad range of market participants as well as the numerous submissions from the parties. The Commission considers that strong evidence supports the concerns as regards the future

[498] "Response to Statement of Objections Concerning the Remedy Proposal", submission of Inco of 22 May 2006.

availability of feed for the Divested Business if it is not part of an integrated mining group. This conclusion is based on the analysis of a number of Inco's internal documents on the evolution of nickel supply, on submissions from various market participants and on commodity analyst reports.

(631) Finally, the Commission notes that its concerns are not based on a mere uncertainty as regards future market developments, as alleged by the parties, but on its assessment that there is a significant risk that the Divested Business would experience difficulties in sourcing sufficient and suitable feed, on account of both significant uncertainties as to future mine developments and the Divested Business' lack of vertical integration.

Inco's internal documents and presentations underline the technical and financial challenges to develop new nickel mines and foresee that the current structural deficit of supply is likely to persist in the next years

(632) As regards the global development of new nickel mining projects, the parties state that *"it is beyond doubt that a very large volume of nickel (...) will be developed in order to meet demand growth over the next decade and beyond"*. […]*.

(633) The development of new nickel supply will not be sufficient to meet additional demand in the next ten years and there are a number of significant challenges that are likely to delay new mining projects:

[…]*[499]: […]*.

(634) According to Inco[500], the risk of cost overruns and technical difficulties in exploiting large scale laterite mining deposits is high. Due to the very strong growth in nickel demand and imports in China and the technical challenges in developing new nickel mines, the market is expected to remain tight for the next several years.

The few projects identified by the parties as likely to produce feed suitable for Nikkelverk are subject to a number of uncertainties

(635) In the course of the procedure, the parties identified existing mines and likely mining projects that are expected to produce intermediate nickel products available and suitable to be refined in Nikkelverk, based on data prepared by […]* for the parties[501]. The parties claim that these projects, excluding Norilsk, will represent 172,000 MT of available nickel feedstock by 2015. The Commission's market investigation has, however, identified a number of major uncertainties regarding these projects, which further contributes to putting into question the availability of feed for the Divested Business if it is not part of a group with sufficient and suitable feed resources. A detailed assessment of each of these projects is included in the Statement of Objections.

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499 […]*.

500 […]*.

501 "Further information on the proposed remedy package", Submission of Inco of 24 March 2006.

(636) The parties further provided a list of less likely projects, comprising a further […]* MT of available and suitable feed in 2015. The Commission's review of these projects, which are at a very early stage of development, has identified a number of issues.

(637) An internal study of Falconbridge discussing potential sources of feed for Nikkelverk[502] also indicates that the likelihood that such feed sources could be available and suitable for Nikkelverk is generally low to medium.

(638) The Commission therefore considers that there is a significant likelihood that a substantial part of these potential feed sources would not be available and suitable for further refining at Nikkelverk. A number of the mining projects identified by the parties may be delayed and their output may not be available as feed for Nikkelverk if the third parties concerned decide to build their own refining facility, in particular in view of the predominance of a vertical integration business model in the nickel industry.

The limited availability of third-party feed is likely to persist in 2015

(639) Finally, the parties and the Commission have attempted to evaluate the global balance between supply and demand of intermediate nickel products in 2015. In view of the long timeframe considered, such evaluation is necessarily subject to high degree of uncertainty. However, the long lead time to develop new projects in the nickel industry, particularly at the mining stage, facilitates projections. The parties alleged that the upstream production capacity for nickel intermediates would exceed refining capacity by 2015. However, the Commission's analysis has indicated that, under reasonable assumptions, the production of nickel intermediates would remain below the installed refining capacity in 2015. Availability of third-party feed for independent refineries would thus remain very limited.

(640) The parties provided estimates of the global upstream nickel intermediate product supply (capacity of processing facilities) and of the global refining capacity in 2010 and 2015, based on public information available on mining, processing and refining projects and on their own market knowledge about these projects[503]. According to the parties, there would be […]* MT per year of upstream intermediate production capacity compared with refining capacity in 2015, in contrast with the position in 2004, in which refining capacity exceeded upstream intermediate production capacity by […]* MT. The parties thus argue that there is every reason to believe that sufficient intermediates will be available to refineries such as Nikkelverk.

(641) The parties however recognise that […]*.

(642) It is worth noting that mining projects have a longer lead-time than projects to build new refineries. Mining projects, which usually comprise the building of integrated processing facilities, are thus known much more in advance than projects to build new refineries. At a given point in time, the public information available on mining projects expected to start production by a certain date is thus more precise and reliable than

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502 […]*.

503 "Response to preliminary feedback from the Commission's market test".

information available on projects to build new refineries or expand existing refineries. Considering all mining/processing and refining projects publicly announces thus introduces a bias and under-estimates the addition of new refining capacity.

(643) The Commission nonetheless shares the parties' view that there would be rough balance between intermediate production capacity and refining capacity in 2015. Based on the current structure of the nickel industry and the fact that all large scale committed mining projects are expected to be developed with integrated refining capacity (Voisey's Bay, Ravensthorpe, Goro, Vermelho, etc.), the Commission however also estimates that a scenario where refining capacity would exceed intermediate production capacity by 2015 is as likely as the parties' scenarios.

(644) The Commission also estimates that even in a scenario where intermediate production capacity would exceed refining capacity by around 100,000 MT (the most favourable for the availability of third-party feed), a refinery like Nikkelverk may have difficulties sourcing third-party feed. The Commission tried to evaluate the quantities of feed that would become available on the market (not used internally by vertically integrated companies) and the requirement of partially vertically integrated refineries for third-party feed. With positive assumptions on the average capacity utilisation rate of processing facilities (87%), the Commission estimates that around 390,000 MT of refining capacity would require third-party feed while only around 310,000 MT of feed would be available on the market in 2015. The Commission notes that this estimate is optimistic on the quantities of feed traded between third parties in 2015, which would account for around 20% of total intermediates production (compared to only 13% in 2005). Furthermore, the quantities of feed available on the market independently from New Inco would be limited to […]* MT.

(645) While this modelling exercise is subject to high degree of uncertainty, it shows that, under reasonable assumptions, the markets for the supply of nickel intermediate products may still be tight in 2015. The actual balance between supply and demand in 2015 will naturally depend on the outcome of new projects, the timing of which is however difficult to predict.

(646) In response to the Commission's modelling on intermediate-refining capacity balance[504], the parties indicate that the Commission's approach fails to take into account industry trends in the supply-demand balance and that the Commission's assessment mixed up future production and capacity figures for nickel processing and refining. The Commission underlines that the proposed model only complements its analysis of industry trends and is not inconsistent with a strong growth in nickel intermediates production. On the contrary, in its analysis of future capacity and production of nickel processing and refining facilities, the Commission takes into consideration the prevailing vertical integration business model in the nickel industry to evaluate the availability of third-party feed on the market. As regards production and capacity, the Commission also takes the view that it makes sense in evaluating the expected nickel intermediates production to use a projected capacity utilization factor of these facilities and that the production of intermediates obtained is the relevant figure to assess the

[504] "Response to Commission questions of April 28, 2006 regarding the intermediate capacity balance", 2 June 2006.

availability of third-party feed for refineries. The Commission notes that the parties share most of the Commission's assumptions in the model as regards future processing and refining capacities.

(647) Market players expressed the same concerns as to the technological challenges of new laterite mining projects and their potential delay. It is worth noting that most of the mining projects to come on stream in the coming years (70%) are expected be based on laterite deposit.

> A market player[505]: *"We feel there may be some supply issues in the next several years. Although there are several big projects coming on stream in the next several years, such as Goro and Ravensthorpe, we feel there will be start up delays and cost overruns with these projects. These projects are technologically difficult and we feel that these companies have underestimated the time needed to get them to run at capacity."*
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> Norilsk[506]: *"Large scale mines are highly capital intensive and, as such, project economics can be easily upset by cost overruns or deviations in prices or exchange rates from project assumptions. Large scale laterite mines carry specific risks associated with the facts that they tend to be more capital intensive than mines producing from sulphides, that laterites are focused on tropical countries with (typically) higher political risk profiles, and that the processing of laterites using pressure acid leach technology, being of relative recent origin, still poses significant technical challenges."*

(648) In its reply to the Statement of Objections, Inco contests the Commission's assessment of the availability of feed in 2015 and states that *"Over the next 5-10 years, there will be more than ample supply of uncontracted, available third party feed suitable for use in Nikkelverk to produce high purity and cobalt"*[507]. Inco's statement is based on a study prepared by […]*[508], […]* Furthermore, the study explains that […]* volumes of laterite-based and other intermediates will come on stream during 2010-2020.

(649) The Commission has reviewed the […]* study on the availability of feedstock for Nikkelverk and the arguments brought forward by the parties. The Commission considers that the analysis of […]* is overly optimistic as regards the development of nickel supply. In particular, as detailed in the Statement of Objections, […]*. Furthermore, the […]* analysis fails to take into consideration the high degree of vertical integration of the nickel industry and the fact that a large share of the nickel mining projects listed will most likely be developed within integrated mining groups. The availability of such feed will thus to a large extent depend on decisions to be taken by the Divested Business' competitors on the downstream markets. In addition, as

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505 A market player's response to the Commission's request for information of 23 March 2006.

506 Norilsk's response to the Commission's request for information of 23 March 2006.

507 "Response to Statement of Objections Concerning the Remedy Proposal", submission of 22 May 2006.

508 "Nikkelverk will have access to required feedstocks", prepared by […]* for Inco, submission of 22 May 2006.

regards laterite-based feed, the adaptation of Nikkelverk to process such feeds would require significant capital expenditures and large scale laterite projects are more likely to be developed in vertically integrated operations (see recital (668)).

(650) More precisely, the mines / mining projects that […]* presents as uncontracted sources of matte are the same projects as those presented by Inco to the Commission before the Statement of Objections and for which the Commission identified a number of serious uncertainties (see recital (635)). With respect to the laterite-based and other nickel intermediates, the […]* report does not identify individually the nickel mining projects that will provide these nickel intermediates but estimates the quantities available based on the projections of nickel demand growth. The analysis thus entirely relies on the assumptions that the nickel demand growth rate will be around […]* between […]* and that, besides existing and brownfield expansions, new greenfield projects will be developed to match demand growth. […]* further argues that this increase in nickel supply may come from any of the current nickel mining projects, listed in the annexes to the […]* report.

(651) Besides the likelihood of significant delays in nickel mining projects and […]*, which put into question […]* analysis, the Commission considers that a very large proportion of nickel projects listed in the annexes to […]* report[509] are most likely to produce nickel intermediates that will be further processed and refined internally (in the same group) and are thus unlikely to be available to Nikkelverk. In addition, a non-negligible proportion of the new mining projects in the next 10 years is expected to be developed by New Inco.

(652) Finally, as recognized by the parties, […]*. While the […]* study discusses the development of mined nickel, it does not analyse the development of refining capacity, which is relevant to assess the availability of third-party feed for Nikkelverk.

(653) To conclude, despite the parties' claims that the Divested Business will be in a position to source sufficient and suitable feed by 2015, the assessment carried out by the Commission shows that there is a reasonable likelihood that the markets for nickel intermediates will remain tight in 2015. Such situation would significantly threaten the viability of the Divested Business, which could experience significant difficulties in sourcing feed unless it has access to its own feed resources for at least a significant share of Nikkelverk's feed requirements.

Risks to the competitiveness of the Divested Business

(654) The uncertainty about the long-term viability of the Divested Business itself, if it does not have access to its own feed resources, is a major competitive disadvantage for the Divested Business starting immediately after its divestment. The Divested Business will clearly be at a disadvantage vis-à-vis its vertically integrated competitors, in particular New Inco, to compete for the supply of finished nickel products if nickel customers have no guarantee on its long-term viability. In particular, plating and electroforming

[509] Annexes B9 and B10 to "Nikkelverk will have access to required feedstocks", prepared by […]* for Inco, submission of 22 May 2006.

distributors and super alloy producers usually have long term relationship with their nickel supplier and security of supply is key.

(655) The major threats on the quantities of feed the Divested Business may be able to source, and thus on its competitiveness, are (i) delays in the commissioning of large mining projects, (ii) the limited development of new sulphide ore mines, which produce the most suitable feed for Nikkelverk, (iii) decisions of mining operators to refine their feed internally, and (iv) strategic behaviour from its vertically-integrated competitors to impede its access to feed resources. All these factors would tend to limit the quantities of feed available to the Divested Business. Finally, additional constraints on the type of feed that the Nikkelverk refinery may refine efficiently would further restrict the Divested Business' ability to source sufficient volumes.

(656) Further to the above assessment on the long-term availability of feed, vertically integrated nickel producers, in particular New Inco, would have the ability and the incentive to impede the Divested Business' access to feed resources in various ways if it is not part of an integrated mining group with access to its own feed resources. This highlights the vulnerability of a stand-alone refinery.

(657) First, in order to impede the Divested Business' access to feed resources, vertically integrated producers active in downstream markets where the Divested Business would compete may have the ability and the incentive to rather expand their refineries than to supply feed to the Divested Business. The fact the Divested Business will be active on the downstream markets for the supply of high purity nickel products to the plating and electroforming industry and to super alloy manufacturers will for instance provide Inco and Eramet with further incentives to use internally their nickel intermediates production rather than supplying feed and keeping alive a competitor on these high value–added markets.

(658) Secondly, there is a risk that vertically-integrated operators, including New Inco, would make strategic purchases of intermediate products (offering higher prices than warranted) to prevent it from competing effectively. The vertically integrated competitors of the Divested Business that have sufficient flexibility to refine additional nickel intermediates would have the incentive to compete with the Divested Business to source third-party feed and increase the costs of their rival.

(659) Thirdly, in view of the weak power of negotiation of the Divested Business (due to its obligation to source sufficient feed quantities to survive) vis-à-vis large integrated producers, the latter could discipline the Divested Business either through unfavourable pricing conditions or by imposing toll-refining agreements. Alternatively, vertically-integrated market players such as New Inco could impose toll-refining agreements, as has been the case with OMG, which would mean the elimination of the Divested Business as a competitive force on the relevant markets.

(660) […]*[510]: […]*.

[510] […]*.

(661) This example clearly illustrates the risks to the Divested Business' viability if, even before it exists, part of its super alloy customer base may be tied in exclusive and long term supply agreement with Inco.

(662) Even if sufficient quantities of suitable feed were available to the Divested Business, the market investigation has shown that the ability and incentive of the Divested Business to act as a competitive force on the markets where competition concerns arise are subject to a number of uncertainties and risk.

(663) First, the Divested Business may not have the ability and/or the incentive to remain active on the markets for the supply of nickel for plating and electroforming or to super alloy producers. Due to its different business model, the Divested Business may have different ability and incentive to remain in these markets as compared to Falconbridge, which is active at all levels of the supply chain. There is a risk that the Divested Business may find it more attractive to toll-refine intermediate nickel products for third parties or to produce finished nickel products of lower quality.

(664) As discussed above, the market investigation has revealed that the production of high purity nickel, required for plating and electroforming and even more important for super alloy producers, is very demanding in terms of feed resources and refining process. The production of high purity nickel in particular requires access to regular and quality-constant sources of feed (to ensure consistent production of high quality) and for a long duration (to justify the investments needed in refining steps that are necessary to remove all the impurities in a given feed). This explains why the three market players currently active in the supply of high purity nickel to super alloy manufacturers are vertically integrated and have a stable feed mix over the long-term.

(665) Confronted with limited opportunities to source feed in a tight nickel intermediates situation, some of which might only be available for short term or for limited quantities, the Divested Business would not be likely to be in a position to enter into a single long-term feed supply agreement for large quantities, as would be required for the production of high purity finished nickel products on a consistent basis. On the contrary, the Divested Business would most likely face difficulties in sourcing feed in sufficient quantities and would thus have an interest in accepting the broadest range of nickel intermediate products to fill in its refining capacity. However, this would probably be incompatible with the production of high purity nickel with very low fluctuations in its chemical composition.

(666) In its reply to the Statement of Objections[511], on the contrary, Inco considers that Nikkelverk will be able to acquire feed and will remain viable and competitive after the expiration of the supply agreement. Inco claims that Nikkelverk is among the most flexible and the lowest cost refineries in the world and would thus be well placed to source feed from third parties. As regards, the high capital expenditures required adapting Nikkelverk for the refining of laterite-based feeds, Inco submits that such investment should be compared to the capital expenditures required to build a greenfield

[511] "Response to Statement of Objections Concerning the Remedy Proposal", submission of Inco of 22 May, 2006.

facility and that adapting Nikkelverk would present less complexity and risk that building a new laterite refinery.

(667) While the Commission recognizes that Nikkelverk is an efficient refinery, with some flexibility to source various types of feed and operating costs in the lower range of the industry's refining costs, the Commission considers that its different business model and the likely tightness of the third-party feed market give rise to significant competitive disadvantages as explained above. In addition, it is worth noting that, of the three partially integrated refineries likely to compete with Nikkelverk for third-party feed sourcing, Jinchuan has lower operating costs than Nikkelverk and both Sumitomo and OMG's refineries are already currently able to process laterite intermediates while Nikkelverk is not.

(668) As regards the refining of laterite-based nickel intermediates, the Commission does not contest that Nikkelverk could be adapted to refine such feeds but simply notes that the required capital expenditures are substantial and would certainly necessitate a long amortization period. In addition, it is worth noting that the existing large-scale laterite nickel mines (e.g. Yabulu, Murrin-Murrin) produce intermediates that are processed and refined in integrated operations. Furthermore, the three next large-scale laterite projects (Ravensthorpe, Vermelho and Goro) are also developed by integrated mining group which are expected to process and refine the nickel intermediates internally. As an example, the information available to the Commission indicates that CVRD intends to build a new greenfield refinery for its Vermelho laterite project although the potential sale of the Nikkelverk was made public by Inco in November 2005. […]*[512].

(669) Inco further claims that the risks developed in the Statement of Objections as regards possible strategic purchases of feed by New Inco are *"unrealistic"*, *"unfounded speculation"* and *"would prove prohibitively costly"*. On the contrary, as evidenced by Inco's recent tolling agreement with OMG, the Commission estimates that New Inco would have the choice of broad range of strategies to weaken and discipline a stand-alone refinery.

Conclusion

(670) Nikkelverk is Falconbridge's only refinery and produces all the nickel products supplied by Falconbridge to the plating and electroforming industry, all the high purity nickel products sold by Falconbridge for the production of super alloys and all the high purity cobalt products supplied by Falconbridge for the production of super alloys used in safety-critical parts. In addition, the Divested Business includes all the Falconbridge entities in charge of the marketing and the sale of these nickel and cobalt products.

(671) The proposed remedy therefore removes the entire quantitative overlap between Inco and Falconbridge on the three markets where competition concerns have been identified. Provided that the Divested Business will operate as a viable and competitive entity, it will thus take over Falconbridge's market position in the three relevant markets and preserve the effective competition prevailing thereon prior to the proposed transaction.

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512 "Nikkelverk will have access to required feedstocks", […]*, 22 May 2006.

(672) The Commission's investigation has however shown that the essential issue for the assessment of the proposed remedy is the ability of the Divested Business to secure a long-term source of nickel feed suitable for the production of high purity nickel on a consistent basis, at economically attractive conditions. If this condition is not satisfied, it is likely that the Divested Business will be a weak and vulnerable competitor on the relevant markets, unable to effectively compete with New Inco.

(673) The assessment of the current structure of the nickel industry has shown that the vertical integration of mining, processing and refining facilities was the predominant business model. There is currently no stand-alone refinery in the nickel industry and the few refineries that source third-party feed also owns interests in mining and processing facilities. This situation is not expected to change significantly by 2015 as the vertically integrated business model is an efficient response to the need for refineries to secure stable feed sources on the long-term.

(674) It may therefore be concluded that only a purchaser currently in the metals mining and/or processing business that is projected to have the ability to supply sufficient nickel intermediate products sufficient to sustain the economic viability of the Divested Business, could bring sufficient comfort as to ability and incentive of the Divested Business to preserve competition in the long term. This is strongly supported by the results from the market investigation on the remedies carried out by the Commission[513].

(675) As regards cobalt, the Commission notes that, contrary to the nickel industry, vertical integration is not the prevailing business model in the cobalt industry, with significant trading of cobalt intermediates[514]. Over […]* % of Nikkelverk's cobalt production is sourced from third parties. Falconbridge refines custom feed, including cobalt contained in the matte purchased from BCL, and cobalt intermediates from Australia and Africa, under both feed purchase and toll-refining arrangements. In addition, for a period up to ten years, New Inco has committed to supply the Divested Business with similar quantities of cobalt feed as those currently supplied by Falconbridge to Nikkelverk.

(676) A third party has claimed that the proposed remedy would not solve the competition concerns as regards the supply of high purity cobalt suitable for the production of super alloys used in safety-critical parts. This third party argued that if the Divested Business were to be sold to a purchaser that is not currently active in the supply of high purity cobalt and does not have access to sufficient cobalt feed resources, the purchaser would have to source a significant part of its cobalt feed from New Inco and would thus be dependent on its main competitor. The Commission disagrees with this comment and considers that it is not necessary for the purchaser to have sufficient cobalt feed resources to become an effective competitor in the supply of high purity cobalt suitable for the production of super alloys used in safety-critical parts. The transfer of all of Falconbridge third-party feed supply agreements, which cover around […]* % of

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513 Although Inco stated in its reply to the Statement of Objections that a majority of the respondents to the market test on remedies viewed positively the proposed remedy (without Inco's commitment to sell the divested business to LionOre), the Commission underlines that the vast majority of the respondents expressed concerns as regards the future feed supply of the divested business.

514 See recitals (604) to (609) above.

Nikkelverk cobalt feed requirement, together with the cobalt feed quantities to be supplied by New Inco for up to ten years under the Matte Supply Agreement and the possibility for the purchaser to source sufficient cobalt feed on the market, will enable the purchaser of the Divested Business to continue producing high purity cobalt in Nikkelverk and competing with New Inco.

(677) Following the Statement of Objections, the parties submitted revised Commitments which complement the commitments offered before the Statement of Objections and provide that the Divested Business will be sold only to a company active in metals mining and/or processing with sufficient nickel resources to sustain the economic viability of the Divested Business at the expiry of the Matte Supply Agreement with New Inco. The level of 55,000 MT per year, which Falconbridge currently supplies to Nikkelverk, is mentioned by Inco as a relevant benchmark.

(678) The Commission considers that this provision fully addresses the Commission's concerns as regards the viability and the competitiveness of the Divested Business as it clearly provided for sufficient assurance as to the Divested Business nickel feed supply. The Commission therefore takes the view that the Commitments are suitable to entirely remove all the competitive concerns identified above.

(679) As regards the Matte Supply Agreement with New Inco, a third party claimed that the pricing mechanism (a fixed refining charge with an escalation factor) was inappropriate and referred to the Commission's own assessment of such pricing mechanism in the Statement of Objections. In this document, the Commission indeed considered that, if the Divested Business were to be sold to a purchaser not active in mining, such pricing mechanism would put the Divested Business at a disadvantage as it would not benefit from any increase in nickel prices. This argument no longer stands once the Divested Business is to be sold to a company already active in mining and/or processing, which already has an exposition to the evolution of nickel prices[515]. The combined business (the purchaser and the Divested Business) will then have a business model similar to its vertically integrated competitors. Finally, in the Commitments, Inco addressed the objections raised by the Commission against the fixed escalation factor (2%) for the refining charge and accepted to base this escalation factor on indices that reflect the actual evolution of the refineries' operation costs (energy, labour, chemicals). The Commission therefore considers that the pricing mechanism proposed in the final version of the Commitments is sufficient to protect the viability and competitiveness of the Divested Business if it is sold to a company already active in metal mining.

VIII. SUITABILITY OF THE PROPOSED PURCHASER

(680) As indicated above, on 7 June 2006, Falconbridge and LionOre entered into the binding Share Purchase Agreement. The Share Purchase Agreement includes a matte supply agreement, according to the terms and conditions defined in the Commitments.

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[515] Except the Boliden and BCL smelters, all operators active in nickel processing are also active in nickel mining.

(681) The closing of this sale is conditional upon the clearance by both the Commission and the U.S. Department of Justice of Inco's acquisition of Falconbridge, as well as Inco taking up and paying for Falconbridge shares pursuant to its offer.

(682) The purchase price to be paid by LionOre for the Divested Business is […]* in LionOre common shares based upon the latest twenty day weighted average trading price for these shares on the Toronto Stock Exchange. As a result, New Inco will control approximately 20% of LionOre outstanding shares. Under the Share Purchase Agreement, Falconbridge/Inco undertake not to vote these shares and to sell its entire shareholding in LionOre within 150 days after closing of the sale of the Divested Business to LionOre. Furthermore, Falconbridge/Inco undertake not to request the appointment of a representative at the board of LionOre.

(683) The same day, Inco requested formally the Commission to approve LionOre as a suitable purchaser for the Divested Business.

(684) The Commission has reached the conclusion that LionOre is a suitable purchaser for the Divested Business.

(685) The present section will first describe the company LionOre and its current mining operations and then assess whether LionOre meets all the criteria set in the Commitments and in particular whether it will be able to supply sufficient feed resources to sustain the economic viability of the Divested Business at the expiry of the Matte Supply Agreement.

Description of the proposed purchaser LionOre

(686) LionOre Mining International Ltd ("LionOre") is a mid-sized producer of nickel with operating mines in Botswana, South Africa, and Australia and in several mining projects in these regions. LionOre's current mines and mining projects are all sulphide mines. The company has been in the nickel business since 1996, producing about 29,000 MT of nickel in 2005, and is the tenth largest nickel producer in the world. LionOre is currently developing a proprietary nickel sulphide hydrometallurgical processing technology called Activox (see recital (704)) which has the potential to significantly increase the company's nickel production and to transform LionOre into a completely vertically integrated producer. The company also has one operating gold mine in Australia. LionOre is headquartered in Toronto and is listed on the stock exchanges in Toronto, in London, in Australia and in Botswana. In May 2006, LionOre had a market capitalization of around USD 1 billion. LionOre's shares are widely dispersed in the public, and none of LionOre's shareholders has a shareholding exceeding 5% of the company's capital.

(687) LionOre's management has extended experience in the nickel industry, and of Nikkelverk, one of its directors being a former CEO of Falconbridge and former General Manager of Nikkelverk.

(688) LionOre has ownership interests in four producing nickel mines and one gold mine. In Africa, the company controls an 85% interest in Tati Nickel in Bostwana and a 50% interest in the Nkomati nickel mine in South Africa. In Western Australia, LionOre has a 100% interest in the Lake Johnston nickel operations, an 80% interest in the Black Swan nickel operations, and a 100% interest in the Thunderbox gold mine. In addition,

LionOre has plans to develop the Honeymoon Well deposit in Western Australia. While the company is working towards becoming a fully integrated nickel producer through its Activox technology, LionOre currently only produces nickel concentrate[516], and does not have any refining capabilities. The total proven nickel resource base of LionOre amounted to 2.3 million MT at the end of 2005.

Tati Nickel

(689) Tati Nickel includes the Phoenix open pit nickel mine which is currently in production, and the Selkirk underground mine which is on care and maintenance. Mining at the Phoenix pit began in 1995. Nickel is concentrated and shipped to the third-party owned BCL smelter about 200 km away, with nickel matte eventually refined at Nikkelverk. At the end of 2005, the Phoenix deposit had proven and probable reserves of 32.3 million MT grading 0.5% nickel, containing 167,800 MT of nickel.

(690) In 2005, Tati nickel produced 8,581 MT of payable nickel at a relatively high average cash cost of USD 3.69/lb. In 2006, production at Tati is expected to increase to 13,500 MT, while average cash cost are anticipated to decrease to USD 2.80/lb. The company is currently upgrading the Tati processing facilities to lift production to 14,500 MT per year by 2007, by increasing ore throughput from 3.6 million MT/year to 5 million MT/year. The construction of a Dense Media Separation (DMS) plant is intended to stabilize grades through the main concentrator plant.

(691) In March 2006, the company announced that an initial scoping study indicated the potential for a large disseminated sulphide mineralization in the Selkirk tenement area. The company has implemented a two year drilling program to fully explore the ore body. LionOre believes that the potential resource could provide a significant long-term concentrate production.

(692) LionOre is currently conducting a feasibility study for a 25,000 MT/year Activox facility at Tati which is anticipated to be completed at the end of June 2006. If approved, construction is expected to begin in 2007 and initial production to start in 2009. The Activox project is anticipated to extend Tati's life by 18 years to around 2030, by first extending the life of mine of the Phoenix pit to 2017, and with mining of the Selkirk resource and processing of the Tati waste dumps.

Nkomati

(693) LionOre acquired a 50% interest in the Nkomati nickel mine in June 2005 from its current partner African Rainbow Minerals ("ARM"). The Nkomati resource contains a relatively higher grade, but small massive sulphide ore body which has been in production since 1997, and a much larger, but lower grade disseminated ore body. Similar to Tati, nickel is concentrated and shipped to Botswana for smelting, with nickel matte sent to the Nikkelverk. By-product copper and PGM concentrate is shipped to Rustenburg for smelting.

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516 LionOre also has a 20% interest in BCL smelter (nickel processing).

(694) In 2005, the mine produced 4,655 MT of payable nickel at a very low cash cost of USD 1.40/lb. In 2006, the mine is anticipated to produce 4,800 MT of payable nickel again at a very low average cash cost of USD 1.40/lb. In addition to nickel, Nkomati produces about 2,800 MT of copper, 22,000 oz of palladium, and 7,000 oz of platinum per year. Mining of the high grade and low cost massive sulphide ore body is anticipated to end in late 2007, as this resource is nearly depleted.

(695) LionOre recently approved development of an interim expansion project designed to bridge the production gap between the depletion of the massive sulphide ore body at the end of 2007 and the start of production at the proposed lower grade disseminated ore body in 2011. The interim project is intended to maintain current production levels at around 4,500-5,000 MT/year, however cash costs are expected to rise to the USD 2.65-2.75/lb level.

(696) A feasibility study on a potential 24,000 MT/year Activox project on the low grade disseminated Nkomati deposit is anticipated to be completed by the end of 2007. If approved, construction is anticipated to begin in 2009 with production starting in 2011. The deposit has sufficient resources to sustain a 24,000 MT/year Activox facility for over 20 years (current measured and indicated resources of 145.4 million MT grading 0.47% nickel and containing 681,200 MT of nickel).

BCL smelter

(697) LionOre has a 20% ownership interest in the BCL smelter, the remainder of the shares being held by the government of Botswana. The Chairman of LionOre is also the Chairman of BCL Smelter. BCL smelter is a large scale facility with the capacity to process 1 million MT of concentrate. The BCL smelter supplies matte to the Nikkerverk refinery.

Lake Johnston

(698) The Lake Johnston operations include the Emily Ann and nearby Maggie Hays underground nickel mines. Production at Emily Ann and Maggie Hays began in 2001 and 2005, respectively. At the end of 2005, the Emily Ann mine had remaining proven and probable reserves of only 322,000 MT grading 2.96% nickel, containing 9,560 MT of nickel. Maggie Hays had proven and probable reserves of 3.3 million MT grading 1.64% nickel, containing 54,200 MT of nickel. Nickel is concentrated on site and then also transported to Esperance, where it is shipped to Inco for processing in Canada.

(699) In 2005, the Lake Johnston operations produced 11,329 MT of payable nickel at an average cash cost of USD 2.57/lb. In 2006, the operation is anticipated to produce 9,500 MT of payable nickel at an average cash cost of USD 3.40/lb. LionOre is currently upgrading the existing underground mining operations and the processing plant capacity from 500,000 MT/year to 1.5 million MT/year, which is anticipated to increase production to 14,000 MT/year by 2007. Average cash costs are anticipated to decline to around USD 2.90-3.00/lb upon completion.

(700) LionOre is also currently developing the relatively small Waterloo nickel mine, located near the Thunderbox gold mine. At the end of 2005, the Waterloo deposit had measured and indicated resources of 299,000 MT grading 3.5% nickel, containing 10,366 MT of nickel. Ore from Waterloo is anticipated to be trucked to either the Lake Johnston or the

Black Swan operations for processing into concentrate. LionOre anticipates production of a relatively modest 200 MT this year. Waterloo is expected to yield 4,500 MT of nickel in 2007 and 3,600 MT in 2008, respectively, at an average cash cost of USD 2.65-2.75/lb.

Black Swan

(701) LionOre acquired an 80% interest in the Black Swan nickel operations at the end of 2004 through the purchase of MPI Mines ("MPI"). OMG owns the remaining 20% of Black Swan. The operation includes two deposits: Silver Swan, a relatively small but high-grade underground mine, and Black Swan, a large but low grade disseminated open pit mine. Nickel is concentrated and then transported to the southern Australian port of Esperance, where it is shipped to OMG in Finland for smelting and refining.

(702) At the end of 2005, the Black Swan operation had 8.6 million MT of proven and probable reserves grading 0.77% nickel, containing 66,227 MT of nickel. In 2005, the mines produced 7,744 MT of payable nickel at a relatively high average cash cost of USD 4.41/lb. In 2006, the operation is anticipated to produce 8,500 MT of nickel (at an average cash cost of USD 4.30/lb. LionOre is currently expanding the existing open pit and upgrading the processing plant capacity to 2.1 million MT/year from the current 600,000 MT/year as it prepares for the depletion of the high grade underground mine. The expansion is anticipated to increase nickel production to 13,000 MT/year by 2007, with average cash costs at USD 3.40-3.50/lb.

Honeymoon Well/Avalon

(703) LionOre purchased the closed Avalon facility in April 2004. A feasibility study on developing the large but low grade and high impurity Honeymoon Well deposit (173.5 million MT grading 0.68% nickel and containing 1.2 million MT nickel) and converting the company's idled Avalon laterite refinery into a 40,000 MT/year Activox facility is anticipated to be completed by the end of 2007. The mine could produce 40,000 MT/year of nickel in concentrate over 25 years. If approved, construction is anticipated to begin in 2009 with production scheduled to begin in 2012.

Activox

(704) Activox is a hydrometallurgical technology designed to process nickel sulphide metal concentrates. Activox is designed to replace the traditional smelting and refining to process nickel concentrates into refined metal. The first stage of the Activox process combines ultra fine grinding followed by pressure oxidation under low temperature and low pressure in the autoclave. The ultra fine grinding of nickel sulphide concentrates activates sulphide minerals in such a way that the mild temperature and pressure Activox leach is able to extract nickel, copper, and cobalt from host sulphide minerals to solution, where the nickel can be concentrated and processed into refined metal using conventional technologies including solid-liquid separation, iron removal, solvent extraction and electrowinning. This is significantly different than the high pressure acid leach (HPAL) nickel laterite processes. The second stage of the Activox process is a classical electrolytic refining process.

(705) LionOre acquired the Activox technology in 1998 with an 80% purchase of Western Minerals Technology, the original developer. In 2003, after two years of testing a

number of nickel concentrates at a pilot plant in Australia, a demonstration plant at Tati was commissioned. The demonstration plant testing Tati ore has been successfully operating since August 2004 with high nickel and copper recoveries.

Suitability of LionOre

(706) In line with general principles exposed above and with the criteria set in the Commitments, the Commission has assessed whether, after the acquisition of the Divested Business, LionOre will become an independent competitive force on the markets where competition concerns have been identified. In particular, the Commission assessed whether LionOre is/will remain independent of Inco/New Inco and has sufficient financial resources to acquire the Divested Business. It then focused on how LionOre could integrate its existing and future nickel mining operations with Nikkelverk and on whether LionOre could supply sufficient quantities of feed to Nikkelverk to sustain the economic viability of the Divested Business at the expiry of the Matte Supply Agreement, as provided for in the Commitments.

Independence from New Inco

(707) The Commission assessed whether LionOre would be a nickel supplier independent of and competing with New Inco after the proposed divestment.

(708) As regards control rights, as a result of the financing of the transaction, New Inco will obtain 20% of LionOre outstanding share at the closing of the sale of the Divested Business. However, Falconbridge/Inco undertake not to vote these shares and to sell its entire shareholding in LionOre within 150 days after closing. Furthermore, Falconbridge/Inco undertake not to request the appointment of a representative at the board of LionOre. The proposed divestment will thus confer on New Inco neither control nor influence over LionOre.

(709) As regards commercial agreements, Inco and LionOre are parties to the following agreements, on an arm's-length basis:

– Exploration and development of nickel mines: There are no existing arrangements between LionOre and either Inco or Falconbridge in relation to exploration and development of mines. There was a historical arrangement between Inco and LionOre under which Inco funded exploration at the Lake Johnston area in return for future concentrate supply. The agreement was terminated more than two years ago.

– Mining, processing and refining technology: LionOre owns the Activox technology. Activox is a hydrometallurgical process for the dissolution of sulphide concentrates by a combination of fine grinding and pressure oxidation. In 2004 LionOre entered into a licence agreement with Inco for the potential use of Activox process for Inco's Voisey's Bay project[517].

517 See: www.inco.com/investorinfo/presentations/pdf/VBN-Aug18slides.pdf

– Sale of intermediate nickel products: LionOre owns and operates the Lake Johnston nickel operation in Western Australia. The concentrate product is sold to Inco under a life of mine off-take agreement.

(710) In addition, as part of the Commitments, LionOre will enter into a matte supply agreement with New Inco. The purpose of the agreement is to guarantee Nikkelverk's feed supply over a 10-year transition period until the purchaser of the Divested Business is able to supply Nikkelverk with sufficient feed to sustain its economic viability. As discussed below, the Commission considers that LionOre has the incentive and is likely to reduce the quantities of matte purchased from Inco progressively over time and to replace this feed with internal feed.

(711) Two third parties claimed that LionOre would have insufficient incentives to compete with New Inco, and would not be unconnected and independent from New Inco due to the structure of the transaction and close commercial relationship between Inco and LionOre (nickel concentrate supply agreement for LionOre's Lake Johnston production and Activox licensing agreement). The Commission has assessed the existing relationships between LionOre and Inco and takes the view that they constitute normal commercial transactions between two independent companies. As regards the temporary shareholding New Inco will acquire in LionOre for a period limited to at most 150 days, the Commission considers, as explained above, that there are sufficient safeguards to prevent New Inco from exercising any influence on the strategy and the operations of LionOre.

(712) In view of the above, it can be concluded that LionOre is independent of Inco and will remain independent of New Inco. The latter will not be in a position to exercise a significant influence on LionOre post-transaction as it will not own controlling rights over LionOre and will not have the ability to modify unilaterally the terms and conditions of the Matte Supply Agreement with New Inco.

Financial resources, proven expertise and incentive to maintain and develop the Divested Business as a viable competitor

(713) LionOre has a sound financial structure and will continue to have financial resources post-acquisition to realize growth prospects. At the end of 2005, LionOre had a strong financial position with a net debt of only USD 20 million compared to an equity of USD 481 million. The company had revenues of respectively USD 518 million and USD 399 million in 2005 and 2004 and generated respectively USD 162 million and USD 161 million of cash flow from operating activities in 2005 and 2004. These cash flows were essentially used to finance the acquisition of MPI and Nkomati and to develop the companies' mining operations. In 2006, the company expects revenues of USD 700-800 million and continued strong cash flow from operations due to the integration of its previous acquisitions, high nickel prices and increased nickel production. Analyst reports on LionOre available to the Commission confirm the solid financial structure of the company and its consistent strong cash flow generation. An analyst report[518] estimates that the net cash position (cash minus debts) of LionOre, before the proposed

[518] Canaccord Adams, Equity research, note on LionOre of 1 June 2006.

transaction and without investment in Activox[519], would reach USD 500 million in 2009 due to the very strong cash flows the company would generate in 2007 and 2008.

(714) The integration of Nikkelverk and the substantial cash flow expected from its operation should enable the company to repay the debt contracted for the acquisition of the refinery and could even enable LionOre to improve its access to financial markets (large market capitalization and more stable risk profile) and its capacity to develop its mining projects. According to the financial models provided by Inco and by LionOre, the free cash flow generated by Nikkelverk should allow LionOre to repay this debt in around four years. LionOre has already secured, in a very short period of time, with banks resources of […]* for the purposes of acquiring the Divested Business, which confirm its good access to financial markets. The acquisition of Nikkelverk should be neutral on LionOre's net cash position within four years and have a significant positive impact thereon after four years.

(715) The company has managed over the past five years to increase considerably its nickel production, to acquire shareholding in nickel mining companies (Tati, Nkomati, MPI Nickel) by combining strong cash flow from its operations and external financial resources (debt and equity). In the view of the Commission, the additional debt contracted by LionOre for the acquisition of Nikkelverk will not weaken the financial position of LionOre or of the Divested Business given the strong cash flow of the combined entity and the strategic fit of LionOre mining assets and the refinery.

(716) A third party claimed that LionOre had insufficient financial resources to be considered as a suitable purchaser. In particular, this third party claimed that LionOre would have insufficient access to capital to develop the Tati, Nkomati and Honeymoon Well projects, which could together represent a capital cost in excess of USD 2 billion. The Commission refers to the above assessment which showed that the company has always been able to finance its rapid growth for the past 10 years and to maintain a sound financial condition. Furthermore, the acquisition of Nikkelverk would not negatively affect LionOre's financial situation. The same third party further argued that the cash flows generated by Nikkelverk would most likely not be available to LionOre to support the development of its mining projects but would be essentially devoted to the repayment of the debt financing its acquisition. The Commission contests the validity of such argument as the combined LionOre and Nikkelverk should be in a position to repay the debt and to finance the development of its mining activities with the cash flow deriving from its activities at all stages of the nickel production chain and, if necessary, with the support of its lenders and shareholders.

(717) The Commission has also assessed LionOre's ability to operate the Divested Business efficiently as a competitive force on the market. As the entire personnel of Nikkelverk and its sales and marketing organizations are part of the Divested Business and will be transferred to LionOre, the Commission considers that LionOre will have the capacity to operate the refinery as it is currently operated by Falconbridge. In addition, the Commission notes that the management team of LionOre has considerable experience and includes three former managers of nickel refineries (Nikkelverk, Bindura and

[519] LionOre's projected cash position before capital expenditures related to the construction of Activox processing and/or refining facilities.

Empress). According to LionOre, the acquisition of Nikkelverk infrastructure, operations and marketing personnel, and sales agreements and the fact that LionOre (through the BCL smelter) already supplies feed to Nikkelverk will enable a seamless transition.

No creation of competition concerns

(718) Prior to the proposed transaction, LionOre was only active at the mining and processing stage of nickel production. LionOre did not own a nickel refinery and was not active in the production or supply of finished nickel products, although it had stated its intention to integrate downstream through the construction of an Activox/electrolytic refinery. The sale of the Divested Business to LionOre is thus unlikely to give raise to any competitive concerns.

(719) In addition, the Commission takes the view that the sale of the Divested Business to LionOre will not lead to a risk of coordinated effects between New Inco and LionOre. As explained above, LionOre is and will remain independent from New Inco. In particular, as regards the Divested Business' feed supply, New Inco will be bound by the provisions of the binding matte supply agreement concluded with LionOre, which have been reviewed by the Commission. The Commission also considers that LionOre will have the ability and incentive to substitute its own feed resources and reduce the quantities purchased from New Inco as soon as possible. LionOre will become an independent vertically-integrated competitor of New Inco and take over Falconbridge's position on the three relevant markets.

Vertical integration of the Divested Business

(720) The acquisition of the Divested Business by LionOre is a major opportunity for the company to integrate downstream in the supply of finished nickel products through the acquisition of a large-scale and efficient nickel refinery together with its existing sales network. Prior to the acquisition of Nikkelverk, LionOre had already publicly stated[520] its strategy to integrate downstream in order to have a direct access to consumers and capture the full value of the nickel production chain. The acquisition of Nikkelverk will allow LionOre to carry its mining projects and integration downstream faster, with less risk and capital investment. Nikkelverk is complementary with LionOre activities. LionOre mines produce nickel concentrates which are sold to third parties for further processing. LionOre also owns a 20% minority shareholding in the BCL smelter in Botswana, which processes concentrates produced at Tati nickel and Nkomati of further refining in Nikkelverk. As indicated above, prior to acquisition of Nikkelverk, LionOre had projected to build one ore two Activox processing / refining facilities to process the Tati and Nkomati concentrates into intermediate nickel products. LionOre is thus currently active in nickel mining and has concrete plans to become active in nickel processing, while Nikkelverk is only active in nickel refining. The acquisition of the Divested Business by LionOre will thus create a fully vertically-integrated market player in the nickel industry.

[520] See LionOre Mining Annual Shareholders Meeting, President's Address, May 2006.

(721) The Commission's assessment has thus focused on the availability of feed for Nikkelverk and on LionOre's capability to reduce the quantities of feed sourced under the Matte Supply Agreement with New Inco and to replace these quantities at the expiry of the agreement. The Commission considers that LionOre has sufficient resources to supply a significant share of Nikkelverk nickel feed requirements with its own feed, in particular after the expiry of the Matte Supply Agreement. The Commission notes that LionOre has not made any commitments with any third-party smelter/refinery for the sale of the nickel intermediates that will be produced at its mining projects. The Commission considers that LionOre will be able to complement its own cobalt resources with purchases of third-party cobalt intermediates on the market to meet Nikkelverk's cobalt feed requirements.

(722) According to LionOre, it will have sufficient own feed to supply Nikkelverk's needs and to transition away from the supply agreement with New Inco as early as 2011.

(723) After the acquisition of Nikkelverk, LionOre will immediately be in a position to supply 15,000 MT in nickel content and 300 MT in cobalt content of its own feed (the nickel matte smelted at the BCL smelter in Botswana) that has been historically supplied to Nikkelverk to the refinery, without requiring any adaptation of Nikkelverk. As of 2010, following planned expansions of its two African mining projects, LionOre will be in a position to supply Nikkelverk with 40,000 MT of nickel in matte annually and 600 to 750 MT of cobalt in matte. Finally, as of 2013, following the development of its large Australian project, LionOre will be in a position to supply all of Nikkelverk's nickel feed needs (85,000 MT annually) and 1,400 to 1,750 MT of cobalt feed. LionOre estimates that the ten-year Matte Supply Agreement will provide it with sufficient supply guarantees, should the company experience delays or difficulties in the implementation of its mining expansion plans.

(724) The planned expansion at Tati is expected to produce about 25,000 MT per year of nickel in concentrate by 2009. According to LionOre, this production level could be sustained for 20 years if the majority of Phoenix resource base can be converted into reserves. Tati's production could be supplemented by additional production from the Selkirk mine, which is under technical review, and could reach an annual production of 17,000 MT of nickel. The Tati concentrate would continue to be processed through the BCL smelter and shipped to Nikkelverk. Nkomati concentrate, which has a high content in PGM and is well suited for refining in Nikkelverk, could be smelted in the BCL smelter as well, which would produce 24,000 MT of nickel annually. The combined Tati and Nkomati production would thus increase to around 50,000 MT per year.

(725) LionOre has the option to acquire the first 75,000 MT of nickel in concentrates produced by the operator Western Areas in their Western Australian operations. According to LionOre, production could start in 2008 and LionOre is envisaging to exercise the option and to smelt the concentrates in the BCL smelter.

(726) In addition, LionOre mentioned that Albidon is currently developing the Munali project in Zambia, with an estimated annual production of 11,000 MT of nickel in concentrates. LionOre considers that smelting at the BCL smelter could be an attractive option for these intermediates.

(727) According to LionOre, the BCL smelter has the capacity to process around 1 million tons per year of concentrates and could thus produce up to 60,000 - 70,000 MT of nickel matte per year depending on the grade of the nickel concentrates it processes. At present, the average grade of nickel in concentrates smelted by BCL is 3.7%, primarily as a result of the low grade concentrate feed from the BCL mines (2.6%). LionOre's intention is to increase the smelter output by increasing the nickel grade of the concentrates processed in BCL.

(728) Furthermore, LionOre is still envisaging the possibility to go ahead with a Tati Activox processing facility in Botswana if the nickel concentrates available to Nikkelverk exceed the BCL smelter capacity. The Activox plant could be fed with a Phoenix / Selkirk blend, with the Selkirk portion increasing over time, resulting in a higher grade of concentrate going to the BCL smelter.

(729) The Honeymoon Well project could produce from 20,000 to 40,000 MT per year of nickel in the form of nickel intermediates and 800 to 1,000 MT of cobalt in the form of cobalt intermediates suitable for refining in Nikkelverk. The project could use the Activox technology to remove talc and arsenic, which are impurities present in the ore, rather than a conventional smelting route. Given the time span, LionOre could adjust the Activox process to produce the nickel intermediates that would best fit with Nikkelverk refining capabilities.

(730) A third party argued that it had serious doubts about LionOre's ability to source sufficient and appropriate intermediate feed to adequately permit Nikkelverk to operate as a sustainable and active competitor to New Inco. According to this third party, most of the nickel mining projects in LionOre's hands are only economically viable if the concentrates are processed with the Activox technology, which has yet to be proven economically viable on a commercial scale. In addition, the third party argued that the type and the composition of any feed produced though the Activox route was still uncertain and that the investment required in Nikkelverk to process this feed could be substantial.

(731) The Commission notes that LionOre does not intend to supply Nikkelverk with feed produced by an Activox plant before 6-7 years, once the Honeymoon Well projects comes on stream. In the meantime, LionOre operations in Southern Africa will progressively be capable of supplying around 50,000 MT to 60,000 MT of nickel matte to Nikkelverk, which account for a significant share of the refinery's feed requirements. These nickel intermediates will have a composition similar to that of the matte already supplied by BCL and Tati to Nikkelverk. Later on, if it owns Nikkelverk, LionOre will naturally have the incentive to supply Nikkelverk with its own feed and it will have sufficient time to evaluate which intermediate is most attractive (from an economic and technical viewpoint) to produce in Honeymoon Well for further refining in Nikkelverk.

(732) In view of the above, the Commission considers that LionOre has access to sufficient nickel resources and has sufficient experience in the industry to sustain the economic viability of the Divested Business. In particular, LionOre's mining projects should enable the company to reduce the nickel feed volumes purchased under the Matte Supply Agreement with New Inco progressively. As regards cobalt, the Commission notes that LionOre will be able to supply 1,400 to 1,750 MT of cobalt feed from its own resources. This is close to the cobalt feed quantities currently supplied by Falconbridge

to Nikkelverk. The Commission takes the view that, given the current structure of the cobalt industry as explained above at recitals (604) to (609), LionOre will, like Falconbridge, be in a position to complement its own cobalt feed resources with purchases of third-party cobalt intermediate products.

(733) It should be pointed out that LionOre has been extremely successful to date in increasing steadily its nickel production over the past five years through expansion of its mining activities and the acquisition of mining assets. LionOre has demonstrated its ability to bring new mining projects on stream and achieve rapid production growth. In 1999, LionOre had a nickel production of only 6,000 MT from one mine. In 2006, LionOre is expected to produce almost 35,000 MT of nickel from four mines.

(734) Finally, it is also relevant to note that LionOre's Tati operation already produces nickel intermediates that are converted into matte by BCL and refined in Nikkelverk and that Falconbridge and BCL have developed a long-term relationship over 20 years to ensure BCL's capability to supply Nikkelverk consistently with suitable matte for the production of high purity nickel. The sale of Nikkelverk to LionOre will thus maintain the existing supply chain and minimize any risk related to changes in feed supply and in refining processes at Nikkelverk.

Conclusion

(735) As indicated above, on 7 June 2006, Falconbridge and LionOre entered into a binding Share Purchase Agreement. This agreement includes a matte supply agreement. The Commission has reviewed the terms and conditions of the Share Purchase Agreement, in particular the matte supply agreement, and concludes that it complies with the Commitments.

(736) The Commission considers that LionOre meets all the criteria in the Commitments for the suitability of the Purchaser and the generic conditions set by the Commission for the suitability of the purchaser in a divestiture remedy. The Commission therefore takes the view that LionOre is a suitable purchaser for the Divested Business and that it will ensure the independence, viability, and competitiveness of the Divested Business in the long term. LionOre combines a number of characteristics that were identified as crucial to meet these conditions: (i) extensive experience and knowledge of the nickel industry; (ii) ownership of mines and mining projects that already/will produce suitable feed for Nikkelverk, and (iii) knowledge of the Nikkelverk refinery process and output.

IX. CONDITIONS AND OBLIGATIONS

(737) Under the first sentence of the second subparagraph of Article 8(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the common market.

(738) Where a condition is not fulfilled, the Commission decision declaring the merger to be compatible with the common market no longer stands. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(5)(b) of the Merger Regulation. The undertakings

concerned may also be subject to fines and periodic penalty payments under Articles 14(2)(d) and 15(2)(c) of the Merger Regulation.

(739) In accordance with the basic distinction described above, this decision should be subject to compliance with the conditions set out in Sections B and D of the Commitments (Annex V to this decision).

(740) In accordance with the basic distinction described above, this decision should be subject to compliance with the obligations set out in Sections C, E and F of the Commitments (Annex V to this decision).

(741) In accordance with the analysis carried out in Sections VII and VIII above, and for the avoidance of doubt, the Commission takes the view that the closing of the sale of the Divested Business to LionOre pursuant to the requirements of the Commitments will ensure full compliance with the conditions as set out in Sections B and D of the Commitments.

(742) Should the sale of the Divested Business to LionOre pursuant to the requirements of the Commitments not take place, this decision will remain subject to full compliance with the conditions and obligations as set out in sections B to F of the Commitments.

X. CONCLUSION

(743) It is concluded that the Commitments are sufficient to address the competition concerns raised by this concentration.

(744) It is concluded that the sale of the Divested Business to LionOre in accordance with the Commitments and subject to the terms as set out in the Share Purchase Agreement will ensure full compliance with the conditions as set out in Sections B and D of the Commitments.

(745) Accordingly, subject to full compliance with the Commitments, the notified operation should be declared compatible with the common market and the EEA Agreement.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Inco Limited ("Inco") acquires sole control of Falconbridge Limited ("Falconbridge") within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 is hereby declared compatible with the common market and the EEA Agreement.

Article 2

Article 1 shall apply subject to full compliance with the conditions set out in Sections B and D of the commitments set out in Annex V.

Article 3

This decision is issued subject to full compliance with the obligations set out in Sections C, E and F of the commitments set out in Annex V.

Article 4

LionOre Mining International Limited ("LionOre") is hereby approved as a suitable purchaser for the divested business comprising the Nikkelverk refinery and related assets subject to the divestment being completed in accordance with the terms of the share purchase agreement concluded between Falconbridge, Inco and LionOre on 7 June 2006 and amended on 16 June 2006.

Article 5

This decision is addressed to:

INCO LIMITED
145 King Street West, Suite 1500
M5H 4B7 Toronto, Ontario
Canada

Done at Brussels, 04.07.2006

For the Commission
signed
Neelie KROES
Member of the Commission

XI. ANNEXES

Annex Ia: Specifications of main nickel suppliers' finished nickel products (upper limits in trace elements in ppm). Source Falconbridge[521] […]*

[521] […]*.

Annex Ib: Graph of specifications of main nickel suppliers' electrolytic nickel products (upper limits in trace elements in ppm). Source Falconbridge[522]

[…]*

[522] […]*.

Annex Ic: Specifications of suppliers' high purity nickel products (upper limits in trace elements in ppm). Source: Market investigation[523]

[…]*

[523] Source: Responses of third parties' to the Commission's market investigation.

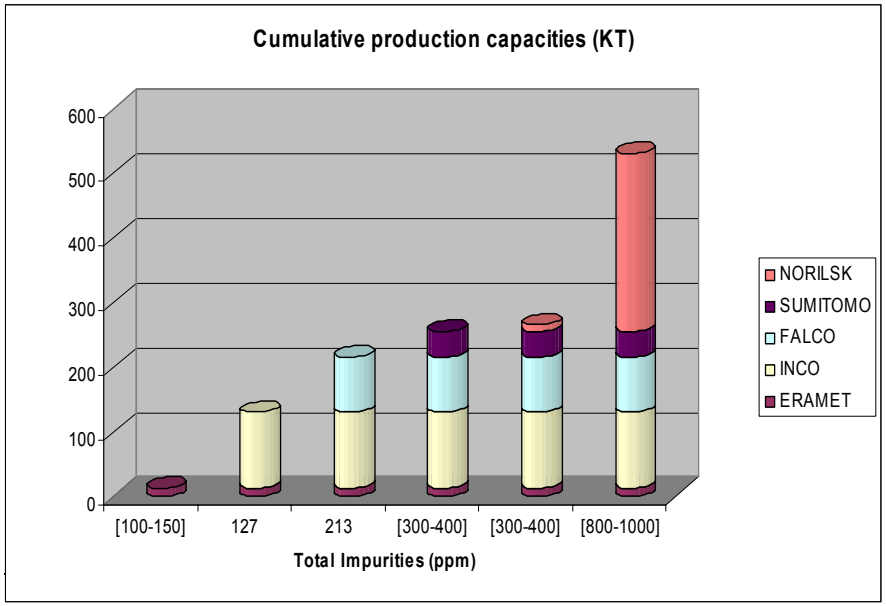
Annex II: Super alloy customers' specifications for high purity nickel products used in the production of super alloys (upper limits in trace elements in ppm). Source: Market investigation[524]

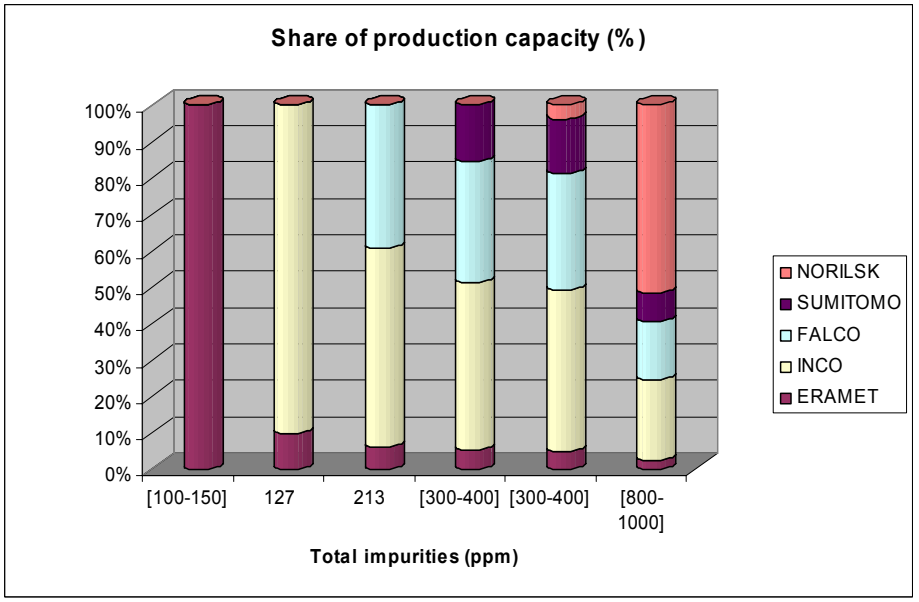
[…]*

[524] Source: Responses of third parties' to the Commission's market investigation.

Annex III: Super alloy suppliers' specifications for high purity nickel products used in the production of super alloys (upper limits in trace elements in ppm). Source: Market investigation[525]

	Eramet standard guaranty	INCO pellets	Falcon-bridge super-electro	Sumitomo	Norilsk pellets DNK0	Norilsk cathodes H1Y
Total impurities (ppm)	[100-150]	127	213	[300-400]	[300-400]	[800-1000]
Capacity (KT)	0	105	85	40	10	265
Cumulative Capacity (K	13	118	203	243	253	528
ERAMET	13	13	13	13	13	13
INCO		118	118	118	118	118
FALCO			85	85	85	85
SUMITOMO				40	40	40
NORILSK					10	275





525 Source : Responses of third parties' to the Commission's market investigation.

Annex IV: Graph of specifications of main cobalt suppliers' cobalt products (upper limits in trace elements in ppm). Source Falconbridge[526]

[...]*

[526] [...]*.

Annex V: Commitments submitted by Inco Limited and Falconbridge Limited on 26 June 2006

June 26, 2006

By hand and by fax: 00 32 2 296 4301

European Commission

DG Competition

Rue Joseph II 70

B-1000 Brussels

Case COMP/M.4000 – Inco / Falconbridge

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Articles 8(2) and 10(2) of Council Regulation (EC) No. 139/2004 (the "***Merger Regulation***"), Inco Limited ("***Inco***") and Falconbridge Limited (*"**Falconbridge**"*) (together, the "***Parties***") hereby provide the following Commitments (the "***Commitments***") in order to enable the European Commission (the "***Commission***") to declare the acquisition of Falconbridge by Inco (the "***Proposed Concentration***") compatible with the common market and the EEA Agreement by its decision pursuant to Article 8(2) of the Merger Regulation (the "***Decision***").

The Commitments shall take effect upon the date of adoption of the Decision.

This text shall be interpreted in the light of the Decision to the extent that the Commitments are attached as conditions and obligations, in the general framework of Community law, in particular in the light of the Merger Regulation, and by reference to the Commission Notice on Remedies.

A. DEFINITIONS

For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in the light of the Commission Notice on the Concept of Concentration.

Closing: the transfer of the legal title of the Divestment Business to the Purchaser.

Divestment Business: the business or businesses as defined in Section B and the Schedule that the Parties commit to divest.

Effective Date: the date of adoption of the Decision.

Hold Separate Manager: the person appointed by the Parties for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in the Schedule.

Monitoring Trustee: one or more natural or legal person(s), independent from the Parties, who is approved by the Commission and appointed by Inco, and who has the duty to monitor the Parties' compliance with the conditions and obligations attached to the Decision.

Personnel: all personnel currently employed by FNA, as well as the employees of FIL, FUS, FESA, FJKK, and FISA listed in Annex 1 and including the Key Personnel.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

B. THE DIVESTMENT BUSINESS

Commitment to divest

1. In order to restore effective competition, the Parties commit to divest or procure the divestiture of the Divestment Business as a going concern to a Purchaser on terms of sale approved by the Commission in accordance with the procedure described in paragraph 15. To carry out the divestiture, the Parties commit to find a Purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business.

2. The Proposed Concentration shall not be implemented prior to Closing. For the avoidance of doubt, this commitment shall not prevent Inco from purchasing Falconbridge shares pursuant to its offer and completing the Proposed Concentration prior to Closing, but Inco shall not integrate Falconbridge's operations or vote its acquired shares in Falconbridge prior to Closing. Closing will, in any event, take place within a period not exceeding 3 months after the approval of the Purchaser and the terms of sale by the Commission.

3. In order to maintain the structural effect of the Commitments, the Parties shall, for a period of 10 years after the Effective Date, not acquire direct or indirect influence over the whole or part of the Divestment Business, unless the Commission has previously found that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the Proposed Concentration compatible with the common market.

Structure and Definition of the Divestment Business

4. The Divestment Business consists of the Nikkelverk refinery and sulphuric acid plant operated by Falconbridge Nikkelverk A/S and located in Kristiansand, Norway, which carries on the business of development, production, servicing, and sale of finished nickel, copper, cobalt, precious metals and other products. The Divestment Business consists formally of the entire share capital of the Falconbridge subsidiaries Falconbridge Nikkelverk A/S, a corporation formed under the laws of

Norway ("***FNA***"), Falconbridge International Limited, a corporation formed under the laws of Barbados ("***FIL***"), Falconbridge U.S., Inc., a corporation formed under the laws of Pennsylvania ("***FUS***"), Falconbridge Europe S.A., a corporation formed under the laws of Belgium ("***FESA***"), Falconbridge (Japan) Limited, a corporation formed under the laws of Japan ("***FJKK***"), and Falconbridge International S.A., a corporation formed under the laws of Belgium ("***FISA***"). The present legal and functional structure of the Divestment Business as operated to date and as described in more detail in the Schedule, includes:

(a) all tangible and intangible assets (including intellectual property rights) that are part of the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business;

(b) all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business;

(c) all contracts, leases, commitments and customer orders of the Divestment Business; all customer, credit and other records of the Divestment Business (items referred to under (a)-(c) hereinafter collectively referred to as "***Assets***");

(d) the Personnel; and

(e) at the option of the Purchaser, the benefit of a supply agreement (the "***Matte Supply Agreement***") that will be entered into between the Parties and the Purchaser to provide the Purchaser with nickel-in-matte in quantities up to, and quality equivalent to, Falconbridge's projected supply thereof to the Nikkelverk refinery, as well as a specified minimum content of cobalt, for a term of up to ten years from Closing. An outline of the key terms of the Matte Supply Agreement is provided in Annex 3.

C. RELATED COMMITMENTS

Preservation of Viability, Marketability and Competitiveness

5. From the Effective Date until Closing, the Parties shall preserve the economic viability, marketability, and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as commercially reasonable any risk of loss of competitive potential of the Divestment Business. In particular the Parties undertake:

(a) not to carry out any act upon their own authority that might have a significant adverse impact on the economic value, management, or competitiveness of the Divestment Business or that might alter the current nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;

(b) to make available sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans applicable to the Divestment Business; and

(c) to take all reasonable steps, including implementing appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business.

Hold-Separate Obligations of Parties

6. The Parties commit, from the Effective Date until Closing, to keep the Divestment Business separate from their retained businesses and to ensure that Key Personnel of the Divestment Business – including the Hold Separate Manager – have no involvement in any retained business and vice versa. The Parties shall also ensure that the Personnel do not report to any individual outside the Divestment Business.

7. Until Closing, the Parties shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the businesses retained by the Parties. The Parties shall appoint a Hold Separate Manager who shall be responsible for the management of the Divestment Business, under the supervision of the Monitoring Trustee. The Hold Separate Manager shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by the Parties.

8. To ensure that the Divestment Business is held and managed as a separate entity the Monitoring Trustee shall exercise the Parties' rights as shareholder in the Divestment Business (except for their rights to receive dividends that are payable before or as of Closing), with the aim of acting in the best interest of the Divestment Business, determined on a stand-alone basis, as an independent financial investor, and with a view to fulfilling the Parties' obligations under the Commitments. Furthermore, the Monitoring Trustee shall have the power to replace members of the supervisory board or non-executive directors of the board of directors of the companies representing the Divestment Business, who have been appointed on behalf of the Parties. Upon request of the Monitoring Trustee, the Parties shall resign as member of the boards or shall cause such members of the boards to resign.

Ring-fencing

9. The Parties shall implement all necessary measures to ensure that they do not after the Effective Date obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business, subject to any licenses contemplated by the final binding sale and purchase agreement. In particular, the participation of the Divestment Business in a central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. The Parties may obtain information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or whose disclosure to Inco or Falconbridge is required by law.

Non-solicitation clause

10. The Parties undertake, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, any Personnel transferred with the Divestment Business for a period of two years after Closing.

Due Diligence

11. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, the Parties shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:

    (a) provide to potential purchasers sufficient information as regards the Divestment Business;

    (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

12. The Parties shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request).

13. The Parties shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence process and shall submit to the Commission and the Monitoring Trustee a copy of any information memorandum prepared in respect of the Divestment Business.

D. THE PURCHASER

14. In order to ensure the immediate restoration of effective competition, the Purchaser, in order to be approved by the Commission, must:

    (a) be independent of and unconnected to the Parties;

    (b) have the financial resources, proven expertise, and incentive to maintain and develop the Divestment Business as an economically viable and active competitive force in competition with the Parties and other competitors;

    (c) neither be likely to create, in the light of the information available to the Commission, *prima facie* competition concerns nor give rise to any significant risk that the implementation of the Commitments will be delayed, and must, in particular, reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business; and

    (d) be a company currently in the metals mining and/or processing business that, by the date on which the Matte Supply Agreement expires, is projected to have the ability to supply nickel intermediate products that can be refined

into high purity nickel and cobalt products meeting the specifications of the current super alloy, plating, and electroforming customers of Falconbridge in volumes sufficient to sustain the economic viability of the Divestment Business, bearing in mind that Falconbridge is currently anticipated to supply Nikkelverk with around 55,000 tonnes per year of contained nickel and other relevant metals (the before-mentioned criteria for the Purchaser hereafter the "***Purchaser Requirements***").

15. The final binding sale and purchase agreement shall be conditional on the Commission's approval. When the Parties have reached a sale and purchase agreement with a potential purchaser, they shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), to the Commission and (unless the Commission has approved a Purchaser before the Effective Date) the Monitoring Trustee. The Parties must be able to demonstrate to the Commission that the proposed purchaser meets the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. For the approval, the Commission shall verify that the proposed purchaser fulfils the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Personnel, if this does not affect the economic viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser. The Parties, the Commission, and, if applicable, the Monitoring Trustee shall work together to obtain the Commission's approval of any proposed purchaser as soon as possible after the submission of a fully documented and reasoned proposal.

E. THE MONITORING TRUSTEE

I. Appointment Procedure

16. The Parties shall appoint a Monitoring Trustee to carry out the functions specified in the Commitments for a Monitoring Trustee.

17. The Monitoring Trustee shall be independent of the Parties, possess the necessary qualifications to carry out its mandate, for example as an investment bank or consultant or auditor, and shall neither have nor become exposed to a conflict of interest. The Monitoring Trustee shall be remunerated by the Parties in a way that does not impede the independent and effective fulfilment of its mandate.

Proposal by the Parties

18. No later than one week after the Effective Date, the Parties shall submit a list of one or more persons whom the Parties propose to appoint as the Monitoring Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Monitoring Trustee fulfils the requirements set out in paragraph 17 and shall include:

(a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Monitoring Trustee to fulfil its duties under these Commitments; and

(b) the outline of a work plan which describes how the Monitoring Trustee intends to carry out its assigned tasks.

Approval or rejection by the Commission

19. The Commission shall have the discretion to approve or reject the proposed Monitoring Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Monitoring Trustee to fulfil its obligations. If only one name is approved, the Parties shall appoint or cause to be appointed, the individual or institution concerned as Monitoring Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, the Parties shall be free to choose the Monitoring Trustee to be appointed from among the names approved. The Monitoring Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by the Parties

20. If all the proposed Monitoring Trustees are rejected, the Parties shall submit the names of at least two more individuals or institutions within one week of being informed of the rejection, in accordance with the requirements and the procedure set out in paragraphs 16 to 19.

Trustee nominated by the Commission

21. If all such further proposed Monitoring Trustees are rejected by the Commission, the Commission shall nominate a Monitoring Trustee, whom the Parties shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

II. Functions of the Monitoring Trustee

22. The Monitoring Trustee shall assume its specified duties in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Monitoring Trustee or the Parties, give any orders or instructions to the Monitoring Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

23. The Monitoring Trustee shall:

(i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.

(ii) oversee the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by the Parties with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:

(a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the businesses retained by the Parties, in accordance with paragraphs 5 and 6 of the Commitments;

(b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 7 of the Commitments;

(c) (i) in consultation with the Parties, determine all necessary measures to ensure that the Parties do not after the Effective Date obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business, in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the economic viability of the Divestment Business, and (ii) decide whether such information may be disclosed to the Parties as the disclosure is reasonably necessary to allow the Parties to carry out the divestiture or as the disclosure is required by law;

(d) monitor any required splitting of assets and the allocation of Personnel between the Divestment Business and the Parties;

(iii) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision;

(iv) propose to the Parties such measures as the Monitoring Trustee considers necessary to ensure the Parties' compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the economic viability, marketability, or competitiveness of the Divestment Business, the holding separate of the Divestment Business, and the non-disclosure of competitively sensitive information;

(v) review and assess potential purchasers as well as the progress of the divestiture process and verify that, depending on the stage of the divestiture process, (a) potential purchasers receive sufficient information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and (b) potential purchasers are granted reasonable access to the Personnel;

(vi) provide to the Commission, sending the Parties a non-confidential copy at the same time, a written report within 15 days after the end of every month. The report shall cover the operation and management of the Divestment Business so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers. In addition to these reports, the Monitoring Trustee shall promptly report in writing to the Commission, sending the Parties a non-confidential copy at the same time, if it concludes on reasonable grounds that one or both Parties are failing to comply with these Commitments; and

(vii) within one week after receipt of the documented proposal referred to in paragraph 15, submit to the Commission a reasoned opinion as to the suitability and independence of the proposed purchaser and the economic viability of the Divestment Business after the sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the sale of the Divestment Business without one or more Assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser.

III. Duties and obligations of the Parties

24. The Parties shall provide and shall cause their advisors to provide the Monitoring Trustee with all such cooperation, assistance and information as the Monitoring Trustee may reasonably require to perform its tasks. The Monitoring Trustee shall have full and complete access to any of the Parties' or the Divestment Business' books, records, documents, management or other personnel, facilities, sites, and technical information necessary for fulfilling its duties under the Commitments and the Parties and the Divestment Business shall provide the Monitoring Trustee upon request with copies of any document. The Parties and the Divestment Business shall make available to the Monitoring Trustee one or more offices on their premises and shall be available for meetings in order to provide the Monitoring Trustee with all information necessary for the performance of its tasks.

25. The Parties shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters

level. The Parties shall provide and shall cause their advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence process. The Parties shall inform the Monitoring Trustee on possible purchasers, submit a list of potential purchasers, and keep the Monitoring Trustee informed of all material developments in the divestiture process.

26. The Parties shall indemnify the Monitoring Trustee and its employees and agents (each an "***Indemnified Party***") and hold each Indemnified Party harmless against, and hereby agree that an Indemnified Party shall have no liability to Inco or Falconbridge for any liabilities arising out of the performance of the Monitoring Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence, or bad faith of the Monitoring Trustee, its employees, agents, or advisors.

27. At the expense of the Parties, the Monitoring Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to the Parties' approval (this approval not to be unreasonably withheld or delayed) if the Monitoring Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Monitoring Trustee are reasonable. Should the Parties refuse to approve the advisors proposed by the Monitoring Trustee, the Commission may approve the appointment of such advisors instead, after having heard the Parties. Only the Monitoring Trustee shall be entitled to issue instructions to its advisors. Paragraph 26 shall apply mutatis mutandis to advisors to the Monitoring Trustee.

IV. Replacement, Discharge and Reappointment of the Monitoring Trustee

28. If the Monitoring Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Monitoring Trustee to a conflict of interest:

    (a) the Commission may, after hearing the Monitoring Trustee, require the Parties to replace the Monitoring Trustee; or

    (b) the Parties, with the prior approval of the Commission, may replace the Monitoring Trustee.

29. If the Monitoring Trustee is removed according to paragraph 28, the Monitoring Trustee may be required to continue in its function until a new Monitoring Trustee is in place to whom the Monitoring Trustee has effected a full handover of all relevant information. The new Monitoring Trustee shall be appointed in accordance with the procedure referred to in paragraphs 16-21.

30. Besides the removal according to paragraph 28, the Monitoring Trustee shall cease to act as Monitoring Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Monitoring Trustee has been

entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

F. REVIEW CLAUSE

31. The Commission may, where appropriate, in response to a request from the Parties showing good cause and accompanied by a report from the Monitoring Trustee:

(i) grant an extension of the time periods foreseen in the Commitments, or

(ii) waive, modify, or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments.

Where the Parties seek an extension of a time period, they shall submit a request to the Commission no later than one month before the expiry of that period, showing good cause. Only in exceptional circumstances shall the Parties be entitled to request an extension within the last month of any period.

Duly authorised for and on behalf of

INCO LIMITED

By: ___(signed, June 26,2006)_____

Title: _____

FALCONBRIDGE LIMITED

By: ___(signed, June 26,2006)_____

Title: _____

SCHEDULE

1. The Divestment Business as operated to date has the following legal and functional structure:

   (a) the Nikkelverk refinery is owned and operated by Falconbridge Nikkelverk A/S ("***FNA***"). Except as specified elsewhere in this Schedule, FNA owns or leases all assets used in the operation of the Nikkelverk refinery and does not own or lease any other assets. All obligations of FNA have been incurred in connection with the operation of the Nikkelverk refinery;

   (b) the Divestment Business also includes procurement and marketing functions related to the operation of the Nikkelverk refinery and the sale of the products produced at that refinery, comprised of Falconbridge International Limited, a corporation formed under the laws of Barbados ("***FIL***"), Falconbridge U.S., Inc., a corporation formed under the laws of Pennsylvania ("***FUS***"), Falconbridge Europe S.A., a corporation formed under the laws of Belgium ("***FESA***"), Falconbridge (Japan) Limited, a corporation formed under the laws of Japan ("***FJKK***"), and Falconbridge International S.A., a corporation formed under the laws of Belgium ("***FISA***").

2. Following paragraph 4 of these Commitments, the Divestment Business consists of FNA, FIL, FUS, FESA, FJKK, and FISA, and specifically including:

   (a) the Nikkelverk refinery located in Kristiansand, Norway, and all machinery and equipment located therein;

   (b) all tangible assets used in the development, production, servicing, and sale of the products manufactured at the Nikkelverk refinery, including: all real property; any facilities used for research, development, and engineering support, and any real property associated with those facilities; manufacturing and sales assets, including capital equipment, vehicles, supplies, personal property, inventory, office furniture, fixed assets and fixtures, materials, on- or off-site warehouses or storage facilities, and other tangible property or improvements; all licenses, permits and authorisations issued by any governmental organisation; all contracts, agreements, leases, commitments, and understandings; all customer contracts, lists, accounts, and credit records; and other records relating to the Divestment Business;

   (c) subject to paragraph (d) below, all intangible assets that have been used exclusively or primarily in the development, production, servicing, and sale of the products manufactured at the Nikkelverk refinery, including but not limited to all patents, licenses, and sublicenses, intellectual property, trademarks, trade names, service marks, service names, technical information, computer software and related documentation, know-how, trade secrets, drawings, blueprints, designs, design protocols, specifications for materials, specifications for parts and devices, safety procedures for the handling of materials and substances, quality assurance and control

procedures, design tools and simulation capability, and all manuals and technical information provided to the employees, customers, suppliers, agents or licensees of the Divestment Business;

(d) as regards the Falconbridge corporate name, if the Purchaser wishes to use the Falconbridge name as part of its corporate name for an interim period while it transitions to create its own corporate identity, Inco and Falconbridge shall agree to allow the Purchaser such use for the Divestment Business for a period of up to […]* from the completion of the sale of the Divestment Business to the Purchaser. The use of the Falconbridge name would be part of a corporate name that would clearly identify the Divestment Business, such as, for example, the name "Falconbridge Refining Inc." or a variation of that name. The arrangements associated with the use of the Falconbridge name by the Purchaser would need to clearly avoid the creation of any confusion between the owner and operator of the Divestment Business and all of the other operations and business units that are part of Falconbridge Limited and currently use the Falconbridge name as part of their corporate name;

(e) a non-exclusive, non-transferable, royalty-free license(s) for use of any intangible asset that has been used by both the Divestment Business and any of Falconbridge's non-divested businesses, provided that such license(s) may be transferable to any future purchaser of the Divestment Business, and provided further that such license(s) shall be provided on commercially reasonable terms;

(f) all research data concerning historic and current research and development efforts conducted at or for the Divestment Business, including designs of experiments, and the results of unsuccessful designs and experiments;

(g) all employees of FNA, as well as the employees of FIL, FUS, FESA, FJKK, and FISA listed in Annex 1 (the "***Personnel***");

- (h) the following Key Personnel: […]*

3. The Divestment Business will include, at the option of the Purchaser, a Matte Purchase and Sale Agreement (the "***Matte Supply Agreement***") with the Parties under which the Parties will provide the Purchaser with nickel-in-matte in quantities up to

and quality equivalent to Falconbridge's projected supply to Nikkelverk for a term of up to ten years from Closing.

4. The Divestment Business shall not include the items listed in Annex 2.

ANNEX 1

List of Personnel from FIL, FUS, FESA, FJKK, and FISA […]*.

[…]*.

ANNEX 2

Summary of Non-Divested Business Transfers

[…]*.

ANNEX 3

Outline Terms of Matte Supply Agreement

The Matte Supply Agreement is intended to provide the Purchaser, on commercially attractive terms, with a supply of nickel-in-matte ("Inco/Falconbridge Matte") for a period of up to 10 years in an amount equivalent to at least the amount that Falconbridge Limited projected it would provide for toll refining by its Nikkelverk refinery for that up to 10-year period.

The principal terms of the Matte Supply Agreement are described below.

1. Quantities of Inco/Falconbridge Matte subject to sale by Inco/Falconbridge

Year 1:	56,000 MT of nickel in Inco/Falconbridge Matte.
Year 2:	55,000 MT of nickel in Inco/Falconbridge Matte.
Year 3:	56,000 MT of nickel in Inco/Falconbridge Matte.
Year 4:	55,000 MT of nickel in Inco/Falconbridge Matte.
Year 5:	56,000 MT of nickel in Inco/Falconbridge Matte.
Years 6 through10:	55,000 MT of nickel in Inco/Falconbridge Matte.

2. Additional Quantities of Inco/Falconbridge Matte subject to Annual Option Granted by Inco and Exercisable in the Sole Discretion of the Purchaser

Years 1 through 5:	Up to 5,000 MT of nickel in Inco/Falconbridge Matte, in addition to the amounts specified in paragraph 1.

The Purchaser would be required to give notice to Inco at least 12 months prior to the beginning of the applicable contract year (subject to separate notice provisions for the option for 2006) if it intends to exercise its annual option to purchase these additional 5,000 MT of Inco/Falconbridge Matte during each of the first five years.

3. Purchaser Option to Reduce Purchases

The Purchaser would, at its option, be entitled to reduce the quantities of nickel-in-matte that it purchases from Inco/Falconbridge under the Matte Supply Agreement, as follows:

(1) For the first three years of the Matte Supply Agreement, the Purchaser would be required to purchase the full quantities of nickel-in-matte specified in the Matte Supply Agreement under the terms provided therein.

(2) Upon at least three years' prior notice given by the Purchaser, the Purchaser may, at its option, elect to reduce the quantities of nickel-in-matte specified for purchase under the Agreement by (1) up to 50% in years four and five of the Matte Supply Agreement and (2) up to 100% in

years six through 10 of the Matte Supply Agreement, conditional on the fact that, once the Purchaser exercises its option to reduce by 100% for any of years six through nine, the balance for the remaining years until the expiration of the Matte Supply Agreement can only be increased to a level that is 50% of the maximum (*i.e.*, 27,500 MT).

In addition, the Purchaser will have the right to reduce its matte purchases by smaller amounts under shorter notice periods, in accordance with the following provisions:

(3) For each of years four through 10, the Purchaser would have an option to reduce the quantities to be purchased by up to 5,000 MT of nickel-in-matte (in increments of 1,000 MT), subject to pro-ration in the case of year 10, upon at least one year's prior notice;

(4) In lieu of the options in (3) above, for each of years six through 10 the Purchaser would have an option to reduce the quantities to be purchased by up to 10,000 MT of nickel-in-matte (in increments of 1,000 metric tonnes), subject to pro-ration in the case of the year 2016, upon at least two years' prior notice.

4. <u>Pricing of Inco/Falconbridge Matte</u>

The price paid by the Purchaser for Inco/Falconbridge Matte would consist of the following parts:

(1) The commercially recoverable/refined quantities of nickel and any other metals would be priced based upon benchmark (London Metal Exchange or equivalent for nickel, Metal Bulletin free market price for 99.3% purity for cobalt, *etc*.) cash/current market prices.

(2) The specific quantities of metals paid for by the Purchaser would be based upon agreed-upon recovery rates (commonly referred to in the refining business as "accountable" or "payable" metals) and the results of recognized sampling, weighing, and assaying procedures. The agreed-upon recovery rate for metals would include a "built-in" cushion for the Purchaser that would result in an additional profit factor (*i.e*., where the Purchaser would pay for the metals based only upon the agreed-upon recovery rates, even though the actual recovery rates would be higher).

(3) The Purchaser would receive a credit/deduction for its treatment/refining costs consistent with that received by other independent refiners (based upon 2006 budgeted costs for Nikkelverk, which reflect Nikkelverk's actual costs for 2005 subject to agreed-upon adjustments) to produce refined nickel and other metals from the Inco/Falconbridge Matte plus an agreed-upon margin/profit on those costs. These costs would be subject to an agreed-upon annual inflation factor based on Norwegian inflation cost indices.

(4) The Purchaser would sell those refined metals it has recovered (and is not otherwise required to return), realizing any premiums applicable to the end products it produces and markets.

(5) The Purchaser would receive an agreed-upon toll refining charge for any precious metals it toll-refined under the proposed agreement for Inco/Falconbridge.

5. Inco/Falconbridge Matte Specifications

The Matte Supply Agreement would include agreed-upon specifications for the Inco/Falconbridge Matte, with standard penalties payable by Inco if the Inco/Falconbridge Matte includes impurities exceeding agreed-upon levels or does not meet any of the other specifications (metal content, *etc*.). The Inco/Falconbridge Matte will have a specified cobalt content such that the quantities of cobalt supplied to the Purchaser will be equivalent to the quantities that Falconbridge Limited would have supplied to the Nikkelverk refinery during the term of the Matte Supply Agreement.

6. Force Majeure: Fundamental Changes and Other Provisions

The Matte Supply Agreement would include standard force majeure provisions whereby a party who is unable to perform its contractual obligations due to extraordinary events outside its control would be relieved of performance until such time as event(s) giving rise to such failure to perform no longer exist(s). The Matte Supply Agreement would also include a standard provision requiring the parties to work together to resolve the results or consequences of any such event or development if the economics of the agreement have fundamentally and materially changed as a result of events or developments that neither party could have foreseen in good faith at the time the agreement was entered into.

7. Termination Provisions

The Matte Supply Agreement would include standard termination provisions if a party consistently fails to meet any of the material terms and conditions of the agreement after being given a reasonable opportunity to "cure" such failure.

8. Term/Duration of Matte Supply Agreement

As explained in Paragraphs 1 and 2 above, the Matte Supply Agreement would remain in effect for up to 10 years, subject to certain rights given to the Purchaser (as outlined in Paragraph 5 above) that would allow the Purchaser, at its option, to reduce and eventually end its purchases of nickel-in-matte earlier than the term initially specified in the Matte Supply Agreement.

EUROPEAN COMMISSION
Competition DG

Policy and Strategic Support
Enforcement Priorities and Decision Scrutiny

……

Brussels, 26 June 2006

OPINION

of the ADVISORY COMMITTEE on CONCENTRATIONS
given at its 140th meeting on 26 June 2006
concerning a draft decision relating to
Case COMP/M.4000 – Inco/Falconbridge

1. The Advisory Committee agrees with the Commission that the notified operation constitutes a concentration within the meaning of Article 1(3) and 3(1)(b) of the Merger Regulation and that it has a Community dimension as defined by the Merger Regulation.

2. The Advisory Committee agrees with the Commission that for the purpose of assessing the present operation, the relevant product markets are:

   a) The supply of nickel products to the plating and electroforming industry;
   b) The supply of high purity nickel for the production of super alloys/super alloys used in safety critical parts; and
   c) The supply of high purity cobalt for the production of super alloys used in safety critical parts.

3. The Advisory Committee agrees with the Commission that for the purpose of assessing the present operation, the relevant geographic market is EEA-wide for the market for the supply of nickel products to the plating and electroforming industry.

4. The Advisory Committee agrees with the Commission that for the purpose of assessing the present operation, the relevant geographic markets are worldwide for the following markets:

   a) The supply of high purity nickel for the production of super alloys/super alloys used in safety critical parts; and
   b) The supply of high purity cobalt for the production of super alloys used in safety critical parts.

5. The Advisory Committee agrees with the Commission that the proposed concentration is likely to significantly impede effective competition in the common market or in a substantial part of it and the EEA, in particular as a result of the creation of a dominant position, for the following markets:

a) The supply of nickel to the plating and electroforming industry in the EEA;
b) The supply of high purity nickel for the production of super alloys/super alloys used in safety critical parts worldwide; and
c) The supply of high purity cobalt for the production of super alloys used in safety critical parts worldwide.

6. The Advisory Committee agrees that, following the proposed concentration, Inco/Falconbridge will not have the ability or incentive to influence London Metal Exchange (LME) nickel prices by delaying part of their nickel mining projects.

7. The Advisory Committee agrees that the parties have neither demonstrated convincingly enough that the efficiencies could not have been achieved by another means nor would they benefit directly consumers.

8. The Advisory Committee agrees that vertical integration (over the whole chain consisting in mining, processing and refining activities) is currently the prevailing business model in the nickel industry offering significant competitive advantages, both in terms of access to suitable feed in sufficient quantities and over the long-term and in terms of ability to compete on the relevant markets.

9. The Advisory Committee agrees that a significant degree of vertical integration is not necessary in order to ensure access to sufficient and suitable feed in the cobalt industry.

10. The Advisory Committee agrees with the Commission that the undertakings consisting in the divestment of Falconbridge's Nikkelverk refinery and related assets to a purchaser active in metals mining and/or processing with access to sufficient feed to sustain the viability of the divested business, along with the offer to enter with the purchaser into a 10-year flexible feed supply agreement covering a substantial part of Nikkelverk's feed requirements, are sufficient to remove the significant impediment to competition, and will ensure the presence of a viable competitor in the three relevant markets:

a) The supply of nickel to the plating and electroforming industry in the EEA;
b) The supply of high purity nickel for the production of super alloys/super alloys used in safety critical parts worldwide; and
c) The supply of high purity cobalt for the production of super alloys used in safety critical parts worldwide.

11. The Advisory Committee agrees that LionOre is a suitable purchaser for the divested business and that it will ensure the independence, viability, and competitiveness of the divested business in the long term.

12. The Advisory Committee agrees with the Commission that, subject to full compliance with the undertakings offered by the parties, and considered all undertakings together, the proposed concentration does not significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position, within the meaning of Article 2(2) of the Merger Regulation and that the proposed concentration is therefore to be declared compatible with Article 2(2) and 8(2) of the Merger Regulation and Article 57 of the EEA Agreement.

13. The Advisory Committee asks the Commission to take into account all the other points raised during the discussion.

BELGIË/BELGIQUE	**ČESKÁ REPUBLIKA**	**DANMARK**	**DEUTSCHLAND**	**EESTI**
J. MUTAMBA	---	M. KJÆRGAARD	G. THIELE	---
ELLADA	**ESPAÑA**	**FRANCE**	**IRELAND**	**ITALIA**
---	J. FORNELLS DE FRUTOS	B. ALOMAR	I. BAH	L. CIARALLI
KYPROS/KIBRIS	**LATVIJA**	**LIETUVA**	**LUXEMBOURG**	**MAGYARORSZÁG**
---	---	---	---	---
MALTA	**NEDERLAND**	**ÖSTERREICH**	**POLSKA**	**PORTUGAL**
---	A BUDD	---	---	---
SLOVENIJA	**SLOVENSKO**	**SUOMI-FINLAND**	**SVERIGE**	**UNITED KINGDOM**
---	---	C. TALLINIEMI	R. MOLDEN	A. EKPIKEN

EUROPEAN COMMISSION

The Hearing Officer

FINAL REPORT OF THE HEARING OFFICER IN CASE COMP/M.4000 – INCO/FALCONBRIDGE

(pursuant to Articles 15 and 16 of Commission Decision (2001/462/EC, ECSC) of 23 May 2001 on the terms of reference of Hearing Officers in certain competition proceedings – OJ L162, 19.06.2001, p.21)

Written procedure

On 20 January 2006, the Commission received notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 ("Merger Regulation") by which the undertaking Inco Limited ("Inco", Canada) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of the whole of the undertaking Falconbridge Limited ("Falconbridge", Canada) by way of a public bid announced on 11 October 2005.

At the end of the first phase of the investigation, the Commission concluded that the concentration raised serious doubts as to its compatibility with the common market and with the EEA Agreement. The Commission opened phase II of the case on 24 February 2006.

The Commission issued a Statement of Objections on 8 May 2006, to which Inco responded on 22 May 2006.

No access to file issues have been raised with the Hearing Officer in this case. I have not been asked to verify the objectivity of the market tests.

An oral hearing was held at the parties' request on 29 May 2006.

Involvement of third parties

I admitted eight undertakings as third parties according to Article 11(c) of Council Regulation (EC) No 802/2004 ("Implementing Regulation"). With a view to informing them of the nature and subject matter of the procedure, pursuant to Article 16 of the Implementing Regulation, they were sent a non-confidential version of the Statement of Objections, and only two attended the oral hearing.

In the light of the commitments proposed and having analysed the results of the market test, the draft decision concludes that the proposed concentration is compatible with the common market and with the EEA Agreement.

In the light of the above, I consider that the rights to be heard of all participants to the present proceeding have been respected.

Brussels, 27 June 2006

signed
Serge DURANDE