PUBLIC VERSION

COMMISSION DECISION

of 6 May 1998
declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement

(Case No IV/M.970 - TKS/ITW Signode/Titan)

(Only the English text is authentic)

(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(2)(a) thereof,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings[1], as last amended by Regulation (EC) No 1310/97[2], and in particular Article 8(2) thereof,

Having regard to the Commission decision of 22 December 1997 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,

Having regard to the opinion of the Advisory Committee on Concentrations[3],

WHEREAS:

1. On 20 November 1997, the Commission received a notification under Article 4 of Council Regulation (EEC) No 4064/89 (hereinafter: "the Merger Regulation") of a proposed operation by which the German undertakings Thyssen Krupp Stahl GmbH ("TKS") and ITW Signode Holding GmbH ("ITW Signode") were to acquire joint control of the German company Titan Umreifungstechnik GmbH ("Titan").

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[1] OJ L 395, 30.12.1989, p. 1; corrected version: OJ L 257, 21.9.1990, p. 13.

[2] OJ L 180, 9.7.1997, p. 1.

[3] OJ C

2. After examination of the notification, the Commission has concluded that the notified operation constitutes a concentration falling within the scope of the Merger Regulation. On 22 December 1997, the Commission decided to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation after finding that the notified concentration raises serious doubts as to its compatibility with the common market.

I. THE PARTIES

3. TKS is a joint venture company into which Thyssen Stahl AG and the Krupp-Hoesch Stahl AG have merged their activities in the production and distribution of quality steel flat products[4]. The business areas which are merged into TKS achieved a total world-wide turnover of approximately ECU 2 880 million in 1996, of which ECU [...][*]million were achieved within the Community and ECU [...] million were achieved in the EFTA States.

4. ITW Signode is a fully-owned holding company of the US-American undertaking Illinois Tool Works, Inc. ("ITW") and the sole owner of the Signode System GmbH. The business activity of Signode System GmbH essentially consists in the production and distribution of strapping band made of steel and plastic as well as seals for their closure. The ITW group achieved a total world-wide turnover of ECU 3 935 million in 1996, of which approximately ECU [...] million were achieved within the Community and ECU [...] million were achieved in the EFTA States.

5. Titan is currently a fully-owned subsidiary of the Krupp-Hoesch group and possesses two production facilities in Germany, one production facility for steel strapping, balelocks and seals located in Hagen-Kabel and one operating branch located in Schwelm for the design, manufacture and marketing of strapping equipment[5]. However, only the production facilities in Hagen-Kabel are subject to the concentration (see point 7). Titan achieved a total world-wide turnover of ECU 55.5 million in 1996. The Hagen-Kabel production facilities which will be retained by the future joint venture achieved a total world-wide turnover of ECU [...] million, of which approximately ECU [...] million were achieved within the Community and ECU [...] million were achieved in the EFTA States.

II. THE OPERATION

6. The Krupp-Hoesch group in October 1996 decided to sell Titan in order to withdraw from the packaging business. ITW Signode and TKS intend to acquire all of the shares of Titan and thus to form a joint venture. ITW Signode will hold 65% of Titan's share capital whereas TKS will hold 35%. In addition, ITW Signode will contribute its German steel and plastic strapping production lines, operated by the Signode System GmbH in Dinslaken, to the joint venture (see Chart A in the Annex).

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4 The creation of this jointly controlled company was the subject of proceedings under the Merger Regulation and Article 66 of the ECSC Treaty. See Commission Decision in Case No IV/M.925 - Krupp-Hoesch/Thyssen (OJ C 285, 20.9.1997, p. 14.) and Case No IV/ECSC.1243 respectively.

* This version of the Decision has been edited to ensure that confidential information is not disclosed.

5 The manufacture of strapping machines was outsourced to independent assemblers at the end of 1993.

7. On 18 November 1997, Titan has entered into a sales and transfer contract by which, simultaneously with the acquisition of its shares by ITW Signode and TKS, it would sell its strapping machinery and equipment operation located in Schwelm as well as the related industrial property rights, the Titan trademarks and its domestic and foreign distribution organisation to a subsidiary of the medium-sized German undertaking P.W. Lenzen GmbH & Co. KG ("Lenzen"). The entry into force of this sales contract is conditional upon the implementation of the acquisition of joint control of Titan by ITW Signode and TKS.

III. THE CONCENTRATION

Joint control

8. The managing directors ("Geschäftsführer") of the proposed joint venture will be appointed on a proposal from ITW Signode, by unanimous consent of the shareholders' assembly ("Gesellschafterversammlung"). If the shareholders' assembly establishes a Board of Administrators ("Verwaltungsrat") in order to supervise the Board of Directors and to determine the business policy of the joint venture, ITW Signode will appoint two out of the three members of the Board of Administrators, which will take its decisions by simple majority.

9. However, certain strategic commercial decisions require the unanimous consent of the shareholders' assembly, especially the appointment of the managing directors, the approval of the annual financial and business plans including investments and their modification as well as the approval of the extension of the Board of Directors' powers. These veto rights are related to strategic commercial and financial decisions on the future joint venture's business policy and surpass the usual rights protecting the financial rights of minority shareholders[6]. Thus, TKS has rights within the meaning of Article 3(3) of the Merger Regulation which confer the possibility of exercising decisive influence on the strategic behaviour of the joint venture. Therefore, the proposed joint venture will be jointly controlled by ITW Signode and TKS.

Autonomous full function entity on a lasting basis

10. The proposed joint venture brings about a lasting change in the structure of the undertakings concerned. The joint venture agreement is of indefinite duration and includes call and put options which, if exercised, would allow or force ITW Signode to acquire all the shares that TKS will have in the joint venture. These options cannot be exercised before 30 November 2002. Even if the options were exercised at the earliest possible date, the joint venture would exist for at least five years. This period is considered to be sufficiently long to bring about a lasting change in the structure of the undertakings concerned[7].

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[6] See Commission Decision in Case IV/M.897 - Stinnes/Haniel Reederei, OJ C 289, 24.9.1997, p. 3, at paragraphs 7-17.

[7] Commission Notice on the distinction between concentrative and co-operative joint ventures under Council Regulation (EEC) No 4064/89, OJ C 385, 31.12.1994, p. 1, at paragraph 16. See further Commission Decision in Case IV/M.823 - John Deere Capital Corp./Lombard North Central plc., OJ C 359, 28.11.1996, p. 11, at paragraph 9.

11. Furthermore, the notified joint venture constitutes an autonomous economic entity, as it will operate on the strapping markets, performing all the functions normally carried out by undertakings operating on these markets. The joint venture will continue to carry out its activities with its own management and with access to sufficient resources, including finance, staff and assets. In the future the joint venture's production will be undertaken at its facilities in Hagen-Kabel and in Dinslaken, while the distribution will be carried out primarily by the joint venture itself and, additionally, by independent distributors and the distribution subsidiary of the ITW group.

12. The Thyssen and Krupp-Hoesch groups will be major customers of the future joint venture for steel strapping. However, even if both groups were to purchase, at market conditions, all their requirements for steel strapping from the joint venture, the parents would account for only between 25% and 30% of Titan's current world-wide sales. In addition, there is a [...] year supply agreement which will oblige the joint venture to purchase cold-rolled pre-material from a joint venture company in which the Krupp-Hoesch group currently has a controlling interest. These purchases will represent less than 40% of the total raw materials requirements of the future joint venture. TKS also supplies substantial quantities of hot-rolled coil (about [...] tonnes p.a.) to the operation that ITW Signode is contributing to the joint venture. However, as there is no supply contract between ITW Signode and TKS for this tonnage the joint venture will be free to buy from any supplier. Therefore, the joint venture will be sufficiently independent of its parents in relation to the supply of raw materials to ensure its independence. Finally, value added to the pre-material accounts for between 15% and 30% of total production costs, further indicating that the joint venture will operate an autonomous business.

Absence of co-ordination of competitive behaviour

13. As TKS and the Thyssen and Krupp-Hoesch groups do not retain any activities in the production and distribution of strapping band and strapping equipment, the future joint venture will not bring about a co-ordination of the competitive behaviour of independent undertakings.

Conclusion

14. For the above reasons the joint venture arising from the notified operation constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

IV. COMMUNITY DIMENSION

15. The combined aggregate world-wide turnover of all the undertakings concerned exceeds ECU 5 000 million. Two of the undertakings concerned, ITW Signode and TKS, have a Community-wide turnover in excess of ECU 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 therefore has a Community dimension according to Article 1(2) of the Merger Regulation. It does not qualify for co-operation with the EFTA Surveillance Authority pursuant to Article 2 of Protocol 24 to the EEA Agreement.

V. COMPATIBILITY WITH THE COMMON MARKET

16. The proposed joint venture, after the acquisition of the strapping business of Signode System GmbH, will be active in the production, marketing and distribution of steel and plastic strapping band, balelocks and seals. As far as balelocks are concerned no competition concerns arise from the proposed concentration, because balelocks are sold exclusively to customers outside the EEA. Seals are used to join the ends of the strap and maintain its tension. Their sales are therefore directly related to the sale of the strapping with which they will be used, and do not require separate examination. However, as ITW Signode has important activities in the neighbouring markets for strapping equipment, in particular in the markets for sealing heads for strapping machines, these activities must also be taken into consideration when assessing the effects of the proposed concentration.

A. RELEVANT PRODUCT MARKETS

A.1 The market for strapping band

1. Introduction into the strapping market

17. Steel and non-metallic strapping is used to secure, to close, to unitise or to strengthen packages or to reduce package volumes; it is applied under tension by hand tools or automatic machines. Basically, there are four different types of strapping for industrial packaging applications: high-strength steel strapping, regular duty steel strapping, polyester plastic strapping and polypropylene plastic strapping.

18. Steel strapping is produced from cold-rolled steel strip and is further processed to meet the requirements of its intended applications. For use in heavy duty applications steel strapping is manufactured from steel strip with a high proportion of manganese which undergoes special heat treatment. The majority of steel strapping however, is used in regular duty applications which do not call for special requirements as to tensile strength or break strength.

19. Plastic strapping is produced in extrusion lines either from polypropylene or polyester resins. Polyester strapping (hereinafter: "PET strapping") provides for high-strength applications and is characterised by a high impact resistance, whereas polypropylene strapping (hereinafter: "PP strapping") offers the highest elasticity. Plastic strapping, on account of its resistance to corrosion, its superior elongation, improved safety features (being less dangerous when the strapping is removed from the load) and lower weight provides benefits which cannot be achieved by steel strapping.

20. The parties suggest that while, in the past, it may have been appropriate to define a separate product market for steel strapping, owing to economic and technological developments, such market definition may no longer be upheld. In their view, therefore, the relevant product market in this case includes at least both steel and plastic strapping, and may include packaging films (stretch and shrink films).

21. However, the results of the Commission's market investigation show that packaging films do not form part of the same relevant product market as steel strapping. Stretch or shrink films are widely considered by customers to be complementary products which serve as protection for the packaged goods from damage, contamination or the weather rather than being direct substitutes for strapping. Even the parties in their notification said that the vast

majority of packaging films are used for other reasons than those associated with strapping[8]. Furthermore, according to the results of the parties' customer survey, only one out of 168 end-users who were considering changing the strapping material they use indicated that he would replace strapping band by packaging film. Packaging films, therefore, do not form part of a market for strapping band, regardless of whether or not it covers only steel strapping or includes certain types of plastic strapping.

2. Comparison of steel and plastic strapping

Physical and mechanical product characteristics

22. Strapping products can be distinguished by the type of material and certain physical and mechanical properties, in particular their minimum break strength, their tensile strength, their elongation and their impact resistance. The minimum break strength designates the force (load) that can be applied to the strapping material without inducing fracture. The tensile strength corresponds to the maximum stress that can be sustained by a structure in tension. The elongation is the relative change in length caused by tensional stress. Finally, the impact resistance designates the energy (stress impact) which can be imposed from the initial tension up to a pre-selected portion of the minimum break strength.

23. Steel strapping has a tensile strength of between 700 Newton (hereinafter: "N") per mm^2 (regular duty) and 1 250 N/mm^2 (high-tensile strength), whereas the tensile strength of PET strapping ranges between 330 and 600 N/mm^2 and the tensile strength of PP strapping ranges between 280 and 380 N/mm^2. Depending on its size and thickness, regular-duty steel strapping has a minimum break strength of between 3 and 14 kilo Newton (hereinafter: "kN"), whereas the break strength of heavy duty steel strapping ranges between 12 and 28 kN, in special qualities up to 55 kN at maximum. In contrast, while PET strapping has a minimum break strength of between 2 and 10 kN at maximum, PP strapping has a relatively low break strength of between 0.5 and 6 kN.

24. Furthermore, steel strapping, PET strapping and PP strapping show significant differences in the reduction of the initial applied tension over time ("relaxation effect"). According to the Richtlinienarbeit Nr. 3968 of the Verband Deutscher Ingenieure (VDI) (Association of German Engineers), while the tension of steel strapping is still the same after six days after it has been applied, the tension of PET strapping is reduced by about 20% and the tension of PP strapping by up to 80%[9]. Therefore, if the same impact resistance is required, in particular PP strapping must be applied to the packaged goods with a much higher initial tension. This would often require pneumatically or electrically powered tools instead of simple manually-operated tools. In addition, whereas PET straps recover up to 95% of their initial elastic strain after a stress impact has occurred, PP straps regain only 75%[10].

25. In certain applications heat resistance is a pre-condition for strapping to be used. Whereas steel strapping resists temperatures of up to 600-750°C, plastic strapping may weaken

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[8] According to the parties, of the total estimated EEA turnover of ECU 808 million, some 15% of the stretch film and 20% of the shrink film is used in applications which are directly competitive with strapping.

[9] See Richtlinienarbeit VDI Nr. 3968, paragraph 3.2 "Kunststoff-Verpackungsbänder". The expert studies presented by the parties do not deal with physical properties such as creep effect and stress relaxation over time.

[10] Titan Umreifungstechnik GmbH: Technische Spezifikationen - Kunststoffverpackungsband.

considerably at elevated temperatures. According to Euronorm CEN T261, PET strapping is permitted for temperatures of up to 90°C, but the material will soften and increase its elongation characteristics even at lower temperatures. By contrast, PP strapping is recommended for applications the temperature of which does not exceed 35°C. In certain applications in the steel industry, i.e. strapping of hot steel coils, the temperature of the product is a determinant factor. However, such applications account only for between 3% and 10% of total steel strapping consumption in Western Europe.

26. From the comparison of physical and mechanical product characteristics it appears that while PET strapping provides characteristics comparable to those of steel strapping, in particular regular duty steel strapping. PP is a less satisfactory substitute for steel strapping particularly in heavy applications where the strapping is intended to last for a longer time and rigidity and low elongation is decisive, or in applications at higher temperatures. Differences in the physical characteristics of products and their intended uses can provide important information as to the definition of the relevant product market[11] but are not themselves sufficient to exclude the possibility that customers and end-users view those products as being effective alternatives[12]. Therefore it is necessary to evaluate to what extent these differences would prevent a significant number of steel strapping customers from switching to plastic strapping, in particular PP strapping, if the relative price for steel strapping were to increase permanently by a small amount.

Areas of usage and categories of consumers

27. According to the results of the Commission's investigation, steel strapping accounted for approximately 55% in value terms of total strapping consumption in Western Europe in 1997, PET strapping for 11.5% and PP strapping for 34%. In Western Europe, more than 75% of total steel strapping consumption is used in basic steel and non-ferrous production (steel coils, metal sheet, billets, ingots and slabs) and metal working industry (flat products, pipes and tubes, profiles), building materials industry (bricks and blocks), agriculture and forestry (lumber, wood panels), textile and staple fibre industry, in the automobile and components industry, and in the transport and ocean shipping sector.

28. Steel strapping accounts for approximately 97% of total strapping consumption (by value) in the steel and non-ferrous metal production, 92-95% in the steel working sector, 90% in the ocean shipping and transport sector, 77-80% in the staple fibre industry, 69-75% in the brick and block sector, 58-65% in the other building materials industries and 56-70% in the automobile industry. In contrast, PP strapping is predominantly used in the newspapers and printing industry (90-93%), in the food and beverages industry (60-65%), and in the cardboard and corrugated products industry (45-46%). PP strapping currently is not used to a significant extent in the steel production and steel working industries and in the staple fibre industry, while in the building materials industry, PP strapping accounts for less than 15% of total strapping consumption. In most cases where steel and PP strapping are used in the same consumer industry, the strapping materials are used for different applications[13].

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[11] See Commission Decision 93/9/EEC in Case IV/M.214 - Du Pont/ICI, OJ L 7, 13.1.1993, p. 13, paragraphs 21-22; Commission Decision 97/610/EC in Case IV/M.774 - Saint-Gobain/Wacker-Chemie/NOM, OJ L 247, 10.9.1997, p. 1, paragraph 83.

[12] See Commission Notice on the definition of relevant market for the purposes of Community competition law, OJ C 372, 9.12.1997, p. 5, paragraph 36.

[13] The [...] tinplate works in [...] only use small quantities of PET strapping for internal handling between processes. Such applications encompass one circumferential strap on coils of tinplate and two vertical straps

Evidence of substitution in the recent past

29. The notifying parties take the view that today in nearly every field of application, steel strapping could be replaced by plastic strapping. Plastic strapping first replaced steel in relatively simple and undemanding applications where the high strength of steel was not required. In the last decade, however, because of the development of high-tensile PET strapping and the improvement of packaging technology, plastic materials have increasingly been used and have made their way into all applications.

30. This view appears to be supported by the contrasting development of consumption of steel and plastic strapping in recent years. According to the parties, in value terms total consumption of steel strapping in Western Europe diminished by ECU 38.6 million (11.7%) between 1987 and 1997. Total consumption of plastic strapping increased by ECU 128.6 million (73.8%) in the same period. As a result, the share of steel strapping in total strapping consumption diminished from approximately 65% to 49% (by value) between 1987 and 1997. The Commission acknowledges that total sales of plastic strapping have increased strongly in recent years and that in particular PET strapping has made considerable inroads into applications in which previously steel strapping had been used (see below at point 37).

Absolute price differences

31. It is difficult to make a direct comparison of prices for the various types of strapping as there are a large number of variables which need to be taken into consideration. For a given application it may be possible to replace strapping of one type with another type of the same dimensions, though this is unlikely. Similarly, when using different materials different configurations may be the best solution, for example four PP straps might be replaced by three PET straps of different dimensions. However some indicative comparisons may be made. According to the results of the Commission investigation, the price of steel strapping was between ECU 60 and ECU 400 per 1 000 metres, whereas plastic strapping cost between ECU 15 and ECU 90 per 1 000 metres depending on dimensions. Richtlinienarbeit Nr. 3968 of the Verband Deutscher Ingenieure (VDI) states that when comparing strapping of the same dimensions, PET strapping is 20% and PP strapping 40% cheaper than steel[14]. Finally, the notifying parties gave examples of differences in the costs of the different strapping materials for applications for which steel, PET and PP were suitable. For these applications, PET was on average 7% cheaper and PP over 50% cheaper than steel.

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on palletised tinplate bulks. External despatch packaging still requires steel strapping; the polyester strap is removed prior to this final packaging.

[14] See Richtlinienarbeit VDI Nr. 3968, table "Bandeigenschaften im Vergleich (Allgemeine Übersicht)".

Long-term development of prices

32. The parties have presented a chart which has been prepared on the basis of the official statistics of the British Tensional Strapping Association which shows the comparative development of British market prices for steel, PET and PP strapping from 1987 to 1996. This Chart shows clearly a parallel development of prices of steel and PET strapping, whereas the prices of PP strapping seem to have developed more independently of the prices for their potential substitutes.

Switching costs and lead times

33. Costs associated with switching from steel strapping to plastic alternatives encompass the capital investment for new strapping equipment as well as the expenses resulting from operator training and the reorganisation of the strapping processes at the end-users' production sites. Strapping tools usually are designed to be used with either steel or plastic strapping with the result that changing the type of strapping would require the replacement of the complete tool. Strapping machines, on the other hand, can in many cases be operated with either material, as the so-called "sealing head" can be replaced separately. Switching costs appear to be moderate and generally seem not to be a significant factor. For example, the costs of hand tools range from about ECU 80 for a simple manual seal combination tool through to about ECU 2 000 for a modern electrically operated portable tool and can reach up to ECU 5 000 if an electronically controlled tool is used. Steel sealing heads cost between ECU 15 000 and ECU 25 000 and plastic sealing heads vary between ECU 4 000 and ECU 5 000.

Views of customers

34. The views of end users and of customers and competitors of the undertakings concerned are of particular importance for the delineation of the relevant product market. In the present case, to verify the views of the parties, the Commission first undertook a small-scale inquiry among 48 customers of the parties to the concentration for strapping band. Altogether, the purchases of those customers represent approximately 14% of total consumption in Western Europe.

35. Almost all of those customers stated in their replies to the Commission that they could not without any significant problems replace steel strapping in all of their strapping applications. When asked for their reasons, most end-users referred to the superior tensile strength and very high break strength of steel strapping, its temperature resistance compared to plastic, its resistance to sharp edges (abrasion resistance), its exceptional rigidity and low elongation, and its better recycling characteristics. Major customers in the steel producing industry have stated that in 60-70% or even more of their current strapping applications they can only use steel strapping because of product temperature and the break strength and abrasion resistance required. Companies active in the concrete block, limestone, and brick industries which currently use both types of strapping band have stated in their responses to the Commission's inquiry that they could not replace either material in all of their applications but consider steel and plastic strapping to be complementary rather than substitute products. Customers in the limestone industry have stated that they cannot replace steel strapping by plastic alternatives in 90-100% of their current package strapping applications.

36. However, the parties to the concentration have forwarded to the Commission the results of an inquiry among 518 consumers of strapping band, according to which companies which currently use steel strapping already use "plastic" alternatives to a significant extent and would consider switching from steel to "plastic" substitutes. To verify these results, the Commission undertook a second inquiry to which 191 strapping customers replied, covering the major steel strapping consuming industries; further, the survey is widely drawn across Western Europe.

37. Of the total of 69 companies which have changed their strapping materials in the past three years, 39 (20.4% of the total sample) have switched from steel to PET strapping but only 20 (10.5%) have switched from steel to PP strapping. This switching pattern is not the same in all industries using strapping, but switching from steel to PP strapping is considerably lower in the timber and forestry and in the staple fibre and textile industries (none of the contacted companies in these sectors switched from steel to PP strapping) as well as in the metals and steel working industries (only 8.6% have switched from steel to PP strapping). In contrast, in the building materials industry 15.3% of the consumers in this sector have switched from steel to PP strapping and in the automobile industry 16.7% of the consumers in this sector.

38. A total of 59 companies (30.9% of the total sample) told the Commission that they were currently considering changing their strapping materials. Of this total, 49 (25.7%) companies were considering switching from steel to PET strapping but only 17 (8.9%) customers were considering switching from steel to PP strapping. The pattern of future switching is not the same for all sectors. In the timber, staple fibre and automobile sectors none of the companies who responded to the Commission's enquiry is considering a switch from steel to PP strapping. In the building materials industry 2.6% of those responding are considering switching from steel to PP strapping. In the metals and steel working industries 11.6% of the customers are considering switching from steel to PP strapping.

39. In addition, it has to be taken into consideration that a considerable proportion of the switching customers do not use steel strapping and plastic alternatives in similar applications (similar pack goods, similar pack weight). In the metals industries only 32.1% of the customers noted that they would use plastic strapping in similar applications for which they use steel strapping. However, most of these customers (61.1%) use PET strapping whereas only 38.9% (12.5% of the total, excluding those who currently use only plastic strapping) use PP strapping as a direct substitute for steel strapping. Similarly, in the building industries, only 14.8% of the customers use plastic strapping in similar applications to steel strapping and all of them use only PET strapping as a substitute for steel strapping. In the timber and fibre industries, only 10.5% use PP strapping in applications for which they currently also use steel strapping.

3. Conclusion on the strapping market

40. Based on the above the Commission has come to the conclusion that PET strapping clearly is an immediate and satisfactory substitute for steel strapping in most of the applications in which consumers currently use steel strapping. PET strapping therefore forms part of the same relevant product market as steel strapping. In particular the findings of the Commission's survey among suppliers and end-users of strapping support the view that PET plastic strapping in almost all strapping applications is considered an effective substitute for steel strapping except for applications where heat resistance is required. Those applications, however, account for only 3-10% of total steel strapping consumption

in Western Europe and price discrimination between different groups of individual customers according to on whether they use steel strapping in hot applications or not, generally seems not to be feasible.

41. As to whether PP plastic strapping forms part of the same relevant product market as steel strapping, the Commission has doubts due to the differences in the product's physical and mechanical characteristics, absolute prices and the development of prices in the recent past. Furthermore, results of the Commission survey among end-users in various industries seem to indicate that if consumers consider switching from steel to PP strapping, in most cases factors other than relative prices are of decisive importance. However, the Commission is aware of a significant number of customers which have switched from steel to PP strapping in the past three years or currently are considering such a switch. In a number of consumer industries these customers account for more than 10% of the total number of end-users whose views were obtained. This proportion can be considered sufficient to prevent producers of steel strapping from raising prices permanently by a small but significant amount, particularly as the Commission's investigations did not show that steel strapping producers could price discriminate between the various end user applications. In view of this conflicting evidence the Commission has not been able to prove beyond doubt that PP strapping does not form part of the same relevant product market as steel strapping. Therefore, in this case a wider product market for steel strapping including PET and PP plastic strapping had to be considered.

A.2 Sealing heads for strapping band are a relevant product market

42. Sealing heads are the most sophisticated and complex device at the heart of the automated strapping machines and engineered strapping systems which apply tension to the strapping band and make the joint. Hand-operated tools do not have a sealing heads; rather the strapping band is manually fed into the tool and joined together. Sealing heads can be distinguished from the machine body because they are regularly sold individually to independent machine assemblers which do not manufacture sealing heads themselves or produce only a limited number of heads or a narrow range[15]. In 1995-1997, sales of single sealing heads to independent assemblers and competitors accounted for between 15% and 25% in the total number of sealing heads produced by the ITW group and for between 80% and 90% of Titan's production of sealing heads.

43. From the demand side point of view, sealing heads for steel strapping applications cannot be replaced by sealing heads for plastic strapping applications nor vice versa, because of specific characteristics of each type of strapping and the different way in which they are joined - either through stamping the steel band or through applying heat to the plastic band. However, the basic technical characteristics of sealing heads and the engineering know-how required for their production are generally comparable. Furthermore, most of the producers of sealing heads manufacture both types of sealing heads although in differing ratios. For these reasons, from a supply side point of view, the Commission has come to the conclusion that both types of sealing heads belong to the same relevant product market.

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[15] Main customers for single sealing heads for strapping machines are Itipack (Italy), AmCa Machinery Inc. (USA), Sorsa (Spain) and Samuel Strapping Systems (Canada).

B. RELEVANT GEOGRAPHIC MARKETS

B.1 The market for steel and plastic strapping

1. The relevant market is wider than national

44. The relevant geographic market for strapping goes beyond the geographic boundaries of the individual Member States of the Community and EFTA, given that strapping is offered cross-border in all of those states. Both, ITW Signode and Titan, supply customers in all Member States of the Community. Furthermore, with the exception of specific situations in Sweden, Finland and Norway, no major differences in the parties' market shares exist between the major Community countries and EFTA States[16].

45. Strapping band is subject to several internationally accepted norms and standard specifications or to established selection guides and packaging and loading requirements[17]. The notifying parties, therefore, take the view that within the Community and the EFTA States there are no relevant differences as regards the nature and characteristics of the products concerned.

2. The relevant market is not wider than the EEA and Switzerland

Proximity to end-users and consumer preferences for Western European suppliers

46. Strapping band is ordered by the end-users according to their actual consumption, in several instalments over the year. Since any interruption in the delivery of strapping band will have a severely damaging effect on the production process of end-users, customers rank the supplier's reliability and security of delivery among the most important criteria by which they choose their suppliers. For these reasons, based on the results of the market inquiry of the Commission, customers do not seem to consider suppliers established outside the EEA and Switzerland to be readily available alternatives to their present suppliers. None of the end-users who have responded to the Commission's questionnaires have imported any strapping band from suppliers outside Western Europe.

Transport costs

47. According to the parties, costs for transportation from the US to Europe would amount to approximately 5-10% of the final prices for steel strapping, the exact proportion depending on the value of the product and the means of transportation. Transport costs for plastic strapping would amount to less than 5%. Furthermore, from information provided by ITW Signode it appears that total freight and insurance expenses, in general, exceed 10% of customer steel strapping prices for long-distance or overseas transports. Although the transport and insurance costs appear modest it should be remembered that strapping is a low value product for which the value added to the raw materials is 15-30%. In this context, supplies will be sensitive to transport costs.

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[16] The significantly higher market shares of ITW Signode, of up to 70%, in the Scandinavian countries, reflects the acquisition of Burseryds by ITW in 1995 and the continued transitional sales to the independent re-seller Cyklop, the former owner of Burseryds.

[17] For example, Draft European Standard CEN TC261/SC3/WG3 (January 1998) and corresponding norms "Packaging - Specification for tensional steel strapping" and "Packaging - Specification for non-metallic tensional strapping".

Import duties and other non-tariff barriers to trade

48. The duty on imports into the Community from member countries of the WTO (conventional duty rates), applicable since 1 January 1998, are 3.2% for steel strapping, 10.1% for PP strapping and 10.4% for PET strapping. The duties on imports from other countries (autonomous duty rates) are 10%, 23% and 20% respectively. At least the duty rates on plastic strapping are quite significant in view of the modest value added to these products and make it rather unlikely that imports would increase considerably in response to a small but significant increase of relative prices in Western Europe.

Trade flows and imports

49. Official figures on trade flows of strapping band are not available because the tariff and statistical nomenclature of the European Community does not provide for a separate customs code for strapping band[18]. However, according to the parties, about 20 000 tonnes of steel strapping and about 2 000 tonnes of plastic strapping were imported into the EEA in 1996, accounting for approximately 6% and 3% in total EEA sales respectively. Together these imports are believed to account for approximately 5% of the total strapping market. Because of their limited volume, imports of strapping band have not had a significant impact on the conditions of competition in Western Europe, in particular on the price-setting of the major suppliers in this area.

3. Conclusion

50. On the basis of the above findings, the Commission has come to the conclusion that the relevant geographic market for steel and plastic strapping is limited to the EEA area and Switzerland (hereinafter: "Western Europe") because the conditions of competition in this area are sufficiently homogeneous and can be distinguished from neighbouring areas and because, taken together, the transport costs and duty payable place imports at a significant disadvantage to producers based in the EEA.

B.2 The market for sealing heads for strapping machines

51. The geographical scope of the markets for sealing heads is world-wide. There are no significant barriers to imports into the Community and as sealing heads are a relatively high value added product, transport costs do not affect the scope of activity of suppliers and the purchase decisions of their customers. Furthermore, both ITW Signode and Titan sell sealing heads to customers all over the world. In 1995-1997, Titan achieved between 50% and 80% of its total sales of single sealing heads outside the EEA.

C. ASSESSMENT

52. This assessment is carried out on the basis of the parties' statement in the notification that, in accordance with their sale and purchase contract, at the same time as they acquire joint control of Titan that company will sell its strapping machinery and equipment operation to an independent company, Lenzen (see point 7). According to the parties, on the basis of the turnover attained in 1996, their future joint venture company is expected to reach a total turnover in the EEA of approximately ECU [...] million assuming full retention of

[18] The parties have identified customs tariff classification numbers which, in their view, would cover the trade flows of the products under consideration: steel strapping - 72124098; PP strapping - 39202079; PET strapping - 39206290. These customs codes, however, do not represent strapping band only.

current volumes. Of this turnover approximately ECU [...] million would stem from the current Titan company and ECU [...] million from the production facilities to be transferred from ITW Signode.

Intended purpose of the notified operation

53. The proposed concentration results from the Krupp-Hoesch group's intention to withdraw from the production and distribution of strapping and strapping equipment. Krupp-Hoesch initially intended to split the business activities of Titan, its subsidiary in this field, between ITW Signode which would take over all the company's activities outside Germany, and the German undertaking Lenzen which would take over the German part of the business. This operation, which was notified under German competition law, was abandoned in April 1997 after the Bundeskartellamt had expressed serious competition concerns in a warning letter.

54. The operation under consideration is structured differently, with ITW Signode acquiring joint control of Titan's strapping band business only (see point 7). From the perspective of ITW Signode the proposed joint venture is a reflection of the current changes on the German and European steel and strapping markets. Within the context of the joint venture, ITW Signode will complete its production plants in Germany by the addition of the existing production lines of Titan which are partially complementary to its production lines in Dinslaken.

C.1. The major suppliers of strapping band in Western Europe

55. ITW group is the world's largest supplier of strapping and related equipment and is active in Western Europe through its subsidiaries Burseryds Bruk AB (Sweden), Signode Systems GmbH (Germany) and Orgapack Holding AG (Switzerland) with subsidiaries in France, Scotland and the USA). Burseryds and Orgapack were acquired by ITW in 1995 and 1996 respectively. ITW also is active in the neighbouring markets for wrapping products and considers itself to be a world-wide leader in offering customers a single source for stretch wrapping machinery and stretch film[19]. ITW group achieved a total world-wide turnover of ECU 3 935 million in 1996.

56. Titan has two production facilities in Germany, one for steel strapping and seals located in Hagen-Kabel and one located in Schwelm for the design and manufacture of strapping equipment[20]. However, only the production facilities in Hagen-Kabel are subject to the concentration, because the Schwelm business unit will be divested to the Lenzen group. Titan has licensed both the ITW group and Lenzen for the use of a patent related to a method of securing balelocks.

57. The most important supplier of steel strapping besides the parties to the concentration is the family-owned company M.J. Maillis SA ("Maillis"), which operates three productions lines for steel strapping in Greece. Since 1996, the company has also operated a production line for PP and PET plastic strapping. In 1997 it installed a new heat-treatment line which enables it to produce high-strength steel strapping and a production line for stretch film. As Maillis does not have a distribution organisation of its own outside Greece, most of its

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[19] See ITW's Annual Report 1996, page 19.

[20] The manufacture of strapping machines was outsourced to independent assemblers at the end of 1993.

strapping sales are made through independent distributors. Maillis achieved a total world-wide turnover of about ECU 35 million in 1996.

58. Cyklop International is a major supplier of plastic strapping and also manufactures strapping equipment. At present, Cyklop's biggest suppliers of steel strapping are ITW Signode and Titan. Cyklop is also the exclusive distributor in Sweden and Finland for sealing heads and steel strapping machines manufactured by Orgapack, a company belonging to the ITW group, and also sells Orgapack tools on a non-exclusive basis in other Member States. In addition, Cyklop and ITW recently have formed a joint venture company, CS Packaging Corporation, to act as a base for serving potential markets in the Far East. The Cyklop group achieved a total world-wide turnover of about ECU 150 million in 1996.

59. Brevetti Signode Labea S.p.A. is a producer of both steel and plastic strapping and of strapping equipment using manufacturing technology licensed by ITW. The ITW group does not have a share holding in Brevetti, but has granted Brevetti with the exclusive right to supply the Italian market. Brevetti achieved a total world-wide turnover of about ECU 30 million in 1996.

60. Samuel Strapping Systems Company, part of Samuel Manu-Tech Inc. of Canada, is a leading supplier of steel and plastic strapping and strapping equipment in North America. In Western Europe, Samuel is active in the steel and plastic strapping markets through its UK subsidiaries Acme Gerrard Ltd. and Pakseal Industries Ltd.. The Samuel group achieved a total world-wide turnover of about ECU 304 million in 1996.

61. Lenzen, a family-owned German undertaking, produces steel strapping and designs strapping machines. It has achieved a global turnover of about ECU 21 million in 1996. The undertakings Brockhaus and Theis are family-owned medium-sized companies which operate cold-rolling mills in Germany. Etilam/Sollac belong to the French steel producer Usinor SA.

C.2 The market for steel and plastic strapping

1. The present market position of the parties

Size of the market

62. The Commission knows of no statistics, whether official or unofficial (compiled by trade associations etc.), relating to the size of the strapping market. Furthermore, the sales figures of major strapping producers are not readily comparable, since some suppliers do not have a sales organisation of their own but make use of independent distributors and resellers. Hence, the Commission has had to make various calculations in order to establish its own estimate of the market size, based on the sales figures of all major producers in Western Europe. In particular, the Commission has eliminated the double counting of sales resulting from deliveries between competitors and has not taken into consideration the sales of independent distributors and resellers, as they purchase their materials almost exclusively from Western European producers. The Commission has estimated the sales generated by smaller producers and has also taken into consideration the size of imports estimated by the notifying parties (see point 49). As a result, the Commission estimates that total sales of steel and plastic strapping band in Western Europe amounted to approximately ECU 489.4 million in 1997, the margins of

independent distributors and resellers[21]. Of that total approximately ECU 267.4 million were sales of steel strapping, ECU 56.3 million were sales of PET strapping and approximately ECU 165.7 million were sales of PP strapping.

Market shares

63. Total strapping sales of ITW Signode in 1997 amounted to about ECU [...] million, of which ECU [...] million (74.2%) were steel strapping, ECU [...] million (8.2%) PET strapping and ECU [...] million (15.6%) from PP strapping. Those sales represent a market share of approximately [30-35%] of the total market for steel and plastic strapping in Western Europe. Titan achieved a total turnover of about ECU [...] million (only steel strapping) representing a market share of approximately [5-10%]. The next largest suppliers of strapping in Western Europe can be seen from Table 1 below. None of them have market shares exceeding 10% and most have market shares below 5%.

64. Table 1: Leading producers of steel and plastic strapping in Western Europe

- shares in total sales (in value terms) in per cent

	Steel strapping	PET strapping	PP strapping	total steel and plastic strapping	
Suppliers	1997	1997	1997	1996	1997
ITW Signode	[...]	[...]	[...]	[...]	[...]
Titan (Hagen)	[...]	0	0	[...]	[...]
Total parties	**[50-60]**	**[20-25]**	**[15-20]**	**[35-45]**	**[35-45]**
Strapex (CH)	0	< 10	10-20	< 10	< 10
Samuel/ACME Gerrard (UK)	< 10	< 3	< 5	< 5	< 10
Cyklop (D)	0	20-30	< 10	< 10	< 10
Maillis (GR)	< 10	< 3	< 3	< 5	< 5
Brevetti (I)	< 5	0	< 5	< 5	< 5
Teufelberger (D)	0	0	< 10	< 5	< 5
Lenzen (D)	< 5	0	0	< 5	< 5
Sekisui Jushi (NL)	0	0	< 10	< 5	< 5
Kaltwalzwerk Brockhaus (D)	< 5	0	0	< 5	< 5
Theis-Gruppe (D)	< 5	0	0	< 5	< 5
Jäger (D)	0	0	< 10	< 5	< 5
Etilam/Sollac (F)	< 5	0	0	< 5	< 5
Sander (D)	0	< 5	< 5	< 5	< 5
PP Payne (UK)	0	< 5	< 5	< 5	< 5
Plastic Extruders (UK)	0	< 5	< 5	< 5	< 5

Source: Market inquiry of the Commission (only producers with a total market share above 1%).

Remarks: The figures are based on the total sales of the companies after the elimination of double counting resulting from deliveries between competitors. The Cyklop group does not produce steel strapping itself but is active in this market as a distributor only; its sales in this segment

[21] According to the notifying parties, total strapping consumption in Western Europe amounted to ECU 593.2 million in 1997. Of this total, steel strapping sales accounted for ECU 290.3 million and plastic strapping sales accounted for ECU 302.9 million). On this basis the parties' market share would be [30-35%].

therefore have not been shown in the above table. The market shares were calculated on the basis of an estimated market size (see point 62).

Capacities and production

65. The notifying parties have estimated total capacities for steel strapping in Western Europe at between 410 000 and 450 000 tonnes a year during the last three years. This has been confirmed by the Commission's market inquiry, the results of which gave a total steel strapping capacity of approximately 437 300 tonnes in 1997. Of this total, the parties' production lines together accounted for about [45-55%]. The biggest competitor, Maillis, recently increased its steel strapping capacity from 60 000 tonnes to 80 000 tonnes a year or about 18% of total capacity. Overall capacity utilisation in Western Europe was approximately 84% in 1997. In view of an anticipated stagnant demand for steel strapping in the next 2 to 4 years there does not appear to be any significant spare capacity which could effectively constrain the parties' behaviour after the concentration.

66. Total capacity for plastic strapping amounted to approximately 100 000 tonnes in 1996. Of this total, ITW Signode's production lines together account for 15-20%. As a result of the recent expansion of plastic strapping capacity by competitors, the parties' current share of capacity is likely to be below 15%. The biggest plastic competitors, Strapex and Cyklop, together account for between 20% and 30% of total plastic strapping production capacity. Total production capacity for PET strapping amounted to approximately 20-25 000 tonnes, the utilisation of which averaged between 60% and 70%. Maillis has recently started PET and PP plastic strapping production and Brevetti has concrete plans to invest in new PET strapping lines.

2. The market position of the parties concerned after the concentration

Market shares

67. As a result of the proposed concentration, on the basis of the Commission's estimates for the market size, ITW Signode and the proposed joint venture would achieve a combined market share, by value in 1997, of about [35-45%] at the maximum in the total market for steel and plastic strapping. However, ITW Signode expects to lose between [...]% and [...]% of Titan's current steel strapping sales as the result of the transfer of Titan's sales organisation and trademarks to Lenzen. This expected loss appears far too high, given the fact that Titan has no established sales organisation outside Germany. The Commission expects that the Lenzen group will manage to enter into supply contracts with some former customers of Titan in Germany. In view of the special circumstances in the present case, the sales that the future joint venture will lose to Lenzen are expected to amount to [...]% of Titan's current sales. Therefore, taking into consideration this loss of market shares, the combined market share would probably be [less than 40%]. The parties to the concentration would have a combined market share which is about 5-6 times higher than the market share of their next largest competitor. In addition, the notifying parties after the concentration would be the largest supplier of strapping world-wide.

68. Although the parties will have a high market share there is a large number of other suppliers, in particular in the plastic strapping segment. In view of the fact that the overall market for strapping is growing at about 3% a year and the steel segment is in relative decline (see point 30), the market share of the merging parties is expected to decline over time as their presence in the plastic strapping is relatively weaker. Furthermore, since there are continuing improvements in materials and technology, particularly for plastic strapping and equipment, the smaller competitors are likely to be able to further develop their businesses. Several competitors have been installing additional capacity in recent years, in particular Maillis, Lenzen, Teufelberger Strapex, Sander and Plastic Extruders. Even in the steel strapping area where the long term trend in consumption is downwards at least two competing producers are installing additional capacity.

69. At present, none of ITW's competitors is capable of providing customers a comparably comprehensive product range of steel and plastic strapping as the notifying parties. However, the Samuels/Acme group and Maillis both have recently entered the plastic strapping market; Samuel group took over the plastic strapping business of Interlake Corp. which is mainly focused on the US market and Maillis started plastic strapping production at the end of 1996. Both companies have emphasised that they would actively seek to increase their market shares in plastic strapping, in particular in PET strapping in the coming years.

70. ITW Signode is one of the leading suppliers of strapping equipment and has a unique product range of strapping tools and machines both for steel and for plastic strapping. Its major competitors in the strapping equipment markets, however, are the plastic strapping producers Cyklop and Strapex and the engineering firms Fromm and Mosca. These companies are widely considered capable of providing strapping users with a sufficient selection of strapping equipment and have the necessary know-how and technical experience to establish themselves as a reliable alternative to ITW Signode in the equipment markets. Since the Commission's inquiry has shown that customers in their strapping equipment can fairly easily use strapping materials from different producers, the strong position in the markets for strapping equipment cannot be considered a significant advantage for the sale of strapping consumables.

Potential competition

71. Entry into the steel strapping segment of the relevant product market appears to be difficult, at least for newcomers who do not have access to steel processing technology. Furthermore, as demand for steel strapping is likely to decrease in the long term, any newcomer would have to take sales volumes from the present suppliers. According to the parties, there have been no new entrants into the steel strapping business in the last five years. According to the information available to the Commission at present, effective potential competition, whether in the form of establishing new production facilities in Western Europe or through increased imports into this market segment is unlikely in the foreseeable future.

72. By contrast, as far as the segment for plastic strapping is concerned, the barriers to market entry appear to be comparatively modest. According to the parties, total investment cost for a new high-strength PET line is estimated to cost about ECU 1.1 million (not including the costs for installation, for land and buildings) and a combined PP/PET line would not cost very much more. The strong increase in demand for plastic strapping, in particular PP strapping, would make investments in new extrusion lines reasonable and offer opportunities for a profitable entry plan. This has already been proven by the recent

investments made by Maillis. In addition it has to be taken into consideration that capital cost necessary for the conversion of specialised PP strapping lines into combined PP/PET extrusion lines appear to be below even the abovementioned figures. Therefore, the first to invest in new PET production lines are the current producers of PP strapping.

Current customers

73. Strong market positions of suppliers can also be counterbalanced by powerful purchasers who, because of the volume of their requirements and their size and resources, can prevent a producer with a strong market position from exploiting it. This is particularly so in this case, where the products are largely homogeneous and where a substantial proportion of sales are made through distributors. Distributors serve a wide variety of customers and make it more difficult for suppliers such as ITW Signode/Titan to discriminate between different groups of customers.

74. The major consumers of strapping materials are concentrated in industrial sectors such as steel and metals industries, glass manufacture, construction materials, paper production, printing and synthetic fibres, which are characterised by large sophisticated buyers who can negotiate from positions of comparative strength and who have the resources and experience to find alternative suppliers. At present, because strapping is not usually a significant cost, purchase decisions may be made at a comparatively low level in an organisation. However, should there be any important price increase, these customers would bring their size and experience to bear on the suppliers. Customers in the steel industry have additional advantages. They supply the raw material for the production of steel strapping and so have a detailed knowledge of the most important cost component of the strapping manufacturers. In addition they also, in their own businesses slit, heat-treat and coat steel strip. These are the other important operations carried out by steel strapping producers.

Conclusion

75. The above results of the Commission's market investigation show that the proposed operation would not lead to the creation or strengthening of a dominant position on a relevant product market for steel and plastic strapping.

C.3 The market for sealing heads for strapping machines

76. The notified concentration will not lead to any addition of market shares in the market for sealing heads for strapping machines. The current business activities of Titan immediately after the completion of the concentration will be divested to the independent German company Lenzen. Lenzen's position on a combined market for both steel and plastic heads would be stronger than its position on a market for steel heads alone and therefore it will be a serious competitor to the parties. The creation or strengthening of a dominant position on the part of ITW Signode in the market for sealing heads as a result of the concentration can therefore be ruled out.

VI. FINAL CONCLUSION

77. On the basis of the results of the investigation as outlined above, the Commission has come to the conclusion that on the relevant product market for steel and plastic strapping as well as on the relevant product market for sealing heads, the proposed concentration would not lead to the creation or strengthening of a dominant position as a result of which effective competition would be significantly impeded within the common market or the EEA.

HAS ADOPTED THIS DECISION:

Article 1

The notified acquisition of joint control of Titan Umreifungstechnik GmbH by ITW Signode Holding GmbH and Thyssen Krupp Stahl GmbH is declared compatible with the common market and the functioning of the EEA Agreement.

Article 2

This Decision is addressed to:

1. Thyssen Krupp Stahl GmbH
   Kaiser-Wilhelm-Straße 100
   D - 47166 Duisburg

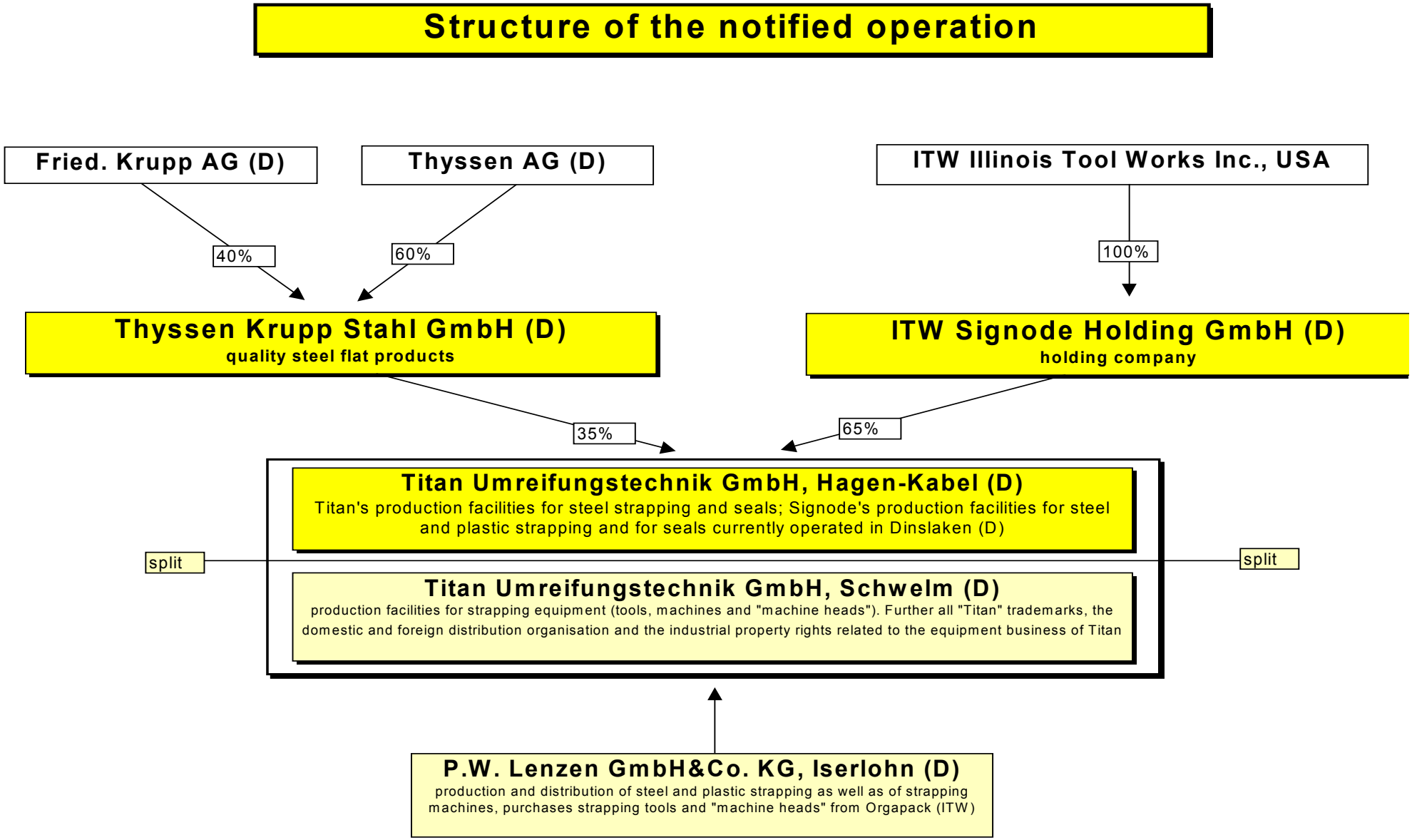
2. ITW Signode Holding GmbH
   Magnusstraße 18
   D - 46535 Dinslaken

Done at Brussels, 6 May 1998

For the Commission

Karel VAN MIERT
Member of the Commission

Chart A


Structure of the notified operation
Fried. Krupp AG (D)
Thyssen AG (D)
ITW Illinois Tool Works Inc., USA
40%
60%
100%
Thyssen Krupp Stahl GmbH (D)
quality steel flat products
ITW Signode Holding GmbH (D)
holding company
35%
65%
Titan Umreifungstechnik GmbH, Hagen-Kabel (D)
Titan's production facilities for steel strapping and seals; Signode's production facilities for steel and plastic strapping and for seals currently operated in Dinslaken (D)
split
split
Titan Umreifungstechnik GmbH, Schwelm (D)
production facilities for strapping equipment (tools, machines and "machine heads"). Further all "Titan" trademarks, the domestic and foreign distribution organisation and the industrial property rights related to the equipment business of Titan
P.W. Lenzen GmbH&Co. KG, Iserlohn (D)
production and distribution of steel and plastic strapping as well as of strapping machines, purchases strapping tools and "machine heads" from Orgapack (ITW)