EN

Case No IV/M.818 - Cardo / Thyssen

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REGULATION (EEC) No 4064/89 MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION
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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 2.12.1996

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

Registered with advice of delivery:
To the notifying parties:

Dear Sirs,

Subject: Case N° IV/M.818 - Cardo/Thyssen
Notification of a concentration pursuant to Article 4 of Council Regulation N° 4064/89

1. On 08.10.1996 the Swedish company Cardo AB ("Cardo") and the German company Thyssen Industrie ("Thyssen") notified their intention to combine their respective railways business in a joint venture (JV) to be jointly controlled by them.

2. The notification was declared incomplete (because of misleading and/or incorrect information) on 22.10.1996. The first investigation carried out suggested that the product market definitions proposed by the parties in the notification did not appear to be technically sound. As a result the Commission was not able to carry out a focused investigation from the beginning of the case. Correct and complete information was finally received on 28.10.1996, and hence this is the date on which the notification became effective.

3. After examination of the notification, the Commission has concluded that the notified operation falls within the scope of Council Regulation No 4064/89 and does not raise serious doubts as to its compatibility with the common market and with the functioning of the EEA Agreement.

I. THE PARTIES

4. Cardo is an international engineering group. The business areas in which Cardo is active are: (a) industrial doors; (b) pumps for use in municipal water and sewage treatment facilities, in the process industry and in the construction sector; (c) brake systems, brake components and other equipment for rail vehicles. Each of these sectors accounts for approximately one third of Cardo's turnover.

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5. Thyssen, which is a subsidiary of Thyssen AG, is an international industrial group with various industrial activities (for example, pipes and pipe systems, castings, elevators, heating and plumbing systems, power engineering, waste management, naval shipbuilding etc.). It also has activities relating to brakes for rail vehicles and components.

II. THE OPERATION

6. The parties have drawn up a joint venture agreement. By virtue of the agreement, they will create a JV, to which virtually all the parties´ activities in the railway sector are to be transferred.

III. CONCENTRATION

7. The JV will be owned 60% by Cardo and 40% by Thyssen. The Board of Directors of the JV will be composed of six members. Cardo will nominate 3 members, Thyssen will nominate 2 members. The Managing Director will be jointly nominated by Cardo and Thyssen. The quorum for all meetings of the Board of Directors will be more than half of the Board members elected. All resolutions at Board meetings will be adopted by a simple majority vote. Approval of both Cardo and Thyssen will be required *inter alia* for the following matters (at any general meeting of the shareholders or at the Board of Directors):

   a. any change in or deviation from the business plan of the JV (the first business plan being annexed to the JV agreement and agreed by both parties);

   b. the appointment of the Managing director of the JV;

   c. the empowerment of persons who will have the right to sign on behalf of the JV and the authorities and powers to be exercised by them.

   These veto rights relate to strategic decisions on the business policy of the JV. The JV will therefore be jointly controlled by Cardo and Thyssen.

8. The JV will have all the financial resources, staff and assets necessary in order to operate a business activity in this sector on a lasting basis.

9. Thyssen and Cardo will transfer virtually all of their activities in the railway business. Cardo will not transfer to the JV its couplers activity. However, the JV will nonetheless be active in the couplers market, as this activity is being transferred to it by Thyssen. The risk of coordination can however be excluded, given that Thyssen will cease being active on that market from then on. In addition, the revenue generated by Cardo in this sector in 1995 was approximately 1 million ECU, while the JV's revenue will be approximately 260 million ECU. Thus Cardo will retain only minor activities in the market of the JV.
10. The JV therefore constitutes a concentration within the meaning of the Article 3(1)(b) of the Merger Regulation.

IV. COMMUNITY DIMENSION

11. The worldwide turnover of the Cardo group is 661 million ECU, that of the Thyssen group 20.879 million ECU. Their Community-wide turnover is of 518 and 15.541 million ECU respectively. Neither Cardo nor Thyssen achieve more than two thirds of their

turnover in one and the same Member State. Therefore, the operation has a Community dimension.

V. COMPATIBILITY WITH THE COMMON MARKETS

12. According to the information provided by the parties, the products concerned by the proposed concentration are brakes, the after-market for brakes, wheels, couplers, gears as well as other equipment, for example, power supply, air-conditioning equipment etc., for rail vehicles. Given that the proposed concentration will lead to combined market shares of the parties of 15% or more only in respect of brakes and wheels, it is not likely that the concentration will lead to the creation or strengthening of a dominant market position on the other above-mentioned markets. The assessment can therefore focus on brakes and wheels.

A. Relevant product markets

1. Brakes

a) Original Equipment

13. The relevant sector affected by the operation is that of brakes for rail vehicles. Rail vehicles include different types of rolling stock, namely light rail vehicles -LRV-, freight cars, locomotives, metros, suburban trains, mainline passenger coaches, high speed trains. The type of brake to be used varies depending upon the nature of the rolling stock. Although the types of brakes used may depend on the type of rolling stock, some basic features are however common to all types of brakes. Indeed, all brakes for rail vehicles are composed of two parts, one being the mechanical brake; the other being the brake control system. These two parts form the brake system. The mechanical brake is the brake function of the brake system and it consists of disc brakes or tread brakes. The brake control system manages the brake function and it consists of a brake actuator and a pressure medium. There are two basic types of brake control systems: pneumatic and hydraulic. Both of them can be mechanically or electronically controlled. Where a system is electronically controlled, it is referred to as "electro-pneumatic" and "electro-hydraulic" as the case may be.

14. Brake discs are best for applications requiring high performance, quick action, precise control and low brake noise. The use of tread brakes implies limited performance (overheating of wheels), slower action, less precise control, and high brake noise. There are also disadvantages of higher wheel wear and increased rolling noise, due to surface roughening induced by the brake shoes. A price comparison between these two types of mechanical brakes is not easy, as the price can vary considerably upon the global brake characteristics and the specifications required. However, indications on the market show that, where the rolling stock and the performance required are equal, the price of a disc brake can be more than 30% higher than that of tread brakes. Tread brakes are normally installed on freight cars and locomotives. Disc brakes are normally installed on all other kind of rolling stocks.

15. Pneumatic control systems are the most commonly-used type control systems. They use a system whereby pressurised air keeps the jaws of the brake open. By relieving the pressure on the circuit, the jaws block the disc. Pneumatic systems have several advantages over hydraulic systems: energy for brake application is provided pneumatically via the brake pipe running throughout the length of each train; compressed

air can be replenished indefinitely and can be vented overboard without environmental damage; energy for application of each brake on the complete train can be easily provided from a central location, usually the traction vehicle. Hydraulic control systems are suited for specialised applications, where little space is available and a very frequent braking activity is demanded. They are installed almost exclusively on LRV and trams. Unlike pneumatic systems, they cannot be connected hydraulically between vehicles, and an individual hydraulic power supply is necessary for each vehicle. In addition, leaks are a problem due to the chemical aggressiveness and limited environmental compatibility of most hydraulic fluids. Electro-hydraulic and electro-pneumatic control systems are hydraulic or pneumatic systems which are controlled electronically.

16. Despite the differences which exist between the individual components - which might suggest the existence of different product markets for each of the components - it should borne in mind that, increasingly, customers, i.e. the assemblers of rolling stocks are no longer purchasing separate components from different suppliers. Instead, they tend to buy complete brake systems for these vehicles from a single contractor. Information provided by the parties and from major customers show that already today a major part of the orders are for complete brake systems, and not for single components. Without exception, all the companies questioned expect this trend to continue in the forthcoming years. The trend is explained by the fact that the end users - the national railways and local and regional transport authorities, mainly of major cities and towns - are requiring the manufacturers to assume total system responsibility. The assemblers, in turn, require the brake manufacturers to assume over-all responsibility for the functioning of the brake.

17. By contrast, smaller competitors on the market are currently unable to produce full brake systems. Consequently, they regard the market as being divided into at least mechanical brakes and brake control systems, and possibly into further segmentations, i.e. tread; disc; pneumatic; hydraulic; electro-pneumatic/electro-hydraulic. However, the relevant product market definition has primarily to be based on the demand side point of view. Consequently, it is questionable whether in the present case the inability of the smaller producers themselves to supply complete brake systems could support a conclusion that there is no market for complete brake systems. Given that most of the customers' purchases of brakes relate to complete brake systems and that the trend is that to buy complete brake systems, it appears reasonable therefore to conclude in favour of the existence of markets for complete brake systems. However, the customers have still the ability to buy the different components separately where necessary. The inability of some smaller competitors to produce such systems is in any event an element to be considered in the assessment of the operation.

18. It appears that the relevant product market for complete brake systems has to be further divided according to the types of rolling stocks on which these systems are installed. It appears reasonable to distinguish between at least four categories of rolling stocks, i.e. LRV and trams; high speed trains; locomotives and freight wagons; mainline trains, on the basis of the different type of brake system used. According to the information provided by the parties, one could distinguish between LRV, freight cars, locomotives, metros, suburban trains, mainline passenger coaches and high speed trains. However, the exact product market definition can be left open for the purpose of this decision, as any possible distinctions do not affect the result of the competitive assessment.

b) Spare parts

19. The parties to the operation are also active on the after-market, which consists of the sale of spare parts. This market has to be distinguished from the market for the original equipment, as according to the results of the investigation carried out by the Commission, most of the contracts for spare parts are concluded separately from the contracts for the original equipment. Contracts for spare parts are normally not with the assemblers but with the end user of the rolling stock, i.e. the national, regional and local railway authorities.

20. The parties claim that the appropriate market level to be investigated is the one including all spare parts. However, there are also indications that one could identify separate product markets, according to the type of spare part. Different types of spare parts have different purposes, as they replace different kind of original parts. In this respect, possible supply-side substitutability has to be taken into account. Only suppliers who are able to produce all different types of brakes, appear to be able to produce all the different types of spare parts. However, the exact product market definition can again be left open for the purpose of this decision, as any possible distinction does not affect the results of the competitive assessment.

2. Wheels

21. Wheels are single wheels and wheel sets. A wheel set consists of the axle and the wheel. Wheel sets can be driven wheel sets or non-driven wheels sets. The difference between them is that driven wheel sets are driven by a motor, consisting of a gear unit mounted to the axle. Single wheels can be either resilient wheels or solid wheels. Resilient wheels consist of a forged wheel body, the tyre and a rubber ring between the tyre and the disc. A solid wheel can be described as a monobloc wheel. The question can be left open, whether single wheels and wheel sets on the one hand, and different kind of single wheels on the other, constitute separate product markets, as the exact product market definition would not have an impact on the assessment of this market.

B. Relevant geographic market

22. The notifying parties contend that the relevant geographic market for the original equipment (brakes), the after market (spare parts) and wheels is at least EEA-wide. Their analysis is based on the absence of legal barriers to trade between Member States; the low transport costs (2-3% of the products value); and the existence of common specifications between railways (UIC). These elements are reflected in the fact that the major competitors are present throughout a range of EEA countries. The same is not true for smaller competitors: these smaller competitors are active principally on their home market because of their relatively small size. The continued existence of different national preferences for these products would not undermine this conclusion, as at least major competitors on the market are able to comply with these specifications.

23. The investigation carried out by the Commission showed that the customers do not regard national proximity as an important factor for their decision to give a contract to a supplier. This conclusion is not undermined by the fact that some suppliers are still of the opinion that national, regional or local preferences act as entry barriers to selling outside their geographic area. In this respect, an important factor in the determination of the relevant geographic market lies in the customers' ability to buy brake systems in different Member States. The big international rail technology companies like ADtranz,

Siemens and GEC Alsthom have subsidiaries all over Europe and are therefore able to obtain contracts even from those suppliers who are basically acting only in a particular Member State. As far as spare parts are concerned, the investigation carried out by the Commission has shown that proximity on its own is not decisive. Local stock-holdings or being represented by local distributors has been regarded as generally sufficient.

24. Therefore, the relevant geographical market can be regarded as EEA-wide.

C. Competitive assessment

1. Brakes

a) Original equipment

(1) Current structure of the market

25. This is a concentrated market. The market leader is the German company Knorr-Bremse. Depending on the kind of rolling stock on which the brake system is installed, Knorr-Bremse would hold an EEA market share of between 40% and 50%. Cardo is currently the second player on the EEA market, with a market share of between 20 and 30%. These two companies are the only suppliers who are able to manufacture complete brake systems suitable for all types of rolling stock. Competitors and customers questioned by the Commission have tended to confirm this view. Thyssen is the third player, with an EEA market share between 5 and 10%. All other players on the market are smaller companies: the British Westinghouse Brakes (3-4%), the German Mannesmann Rexroth (3-4%), the French Dehousse (2%), the Italian Poli (1%). The competitors of Knorr-Bremse and Cardo have stronger positions in their respective home market (Thyssen: between 15 and 20% in Germany; Westinghouse Brakes: between 20% and 40% in the UK; Mannesmann Rexroth: 10% in Germany; Dehousse: 10% in France; Poli: between 5 and 10% in Italy). All these companies, including Thyssen, are not able to produce complete brake systems. Cooperation agreements have been concluded between them, according to their respective specialization, in order to be able to offer complete brake systems on the market. Most of the customers contacted by the Commission have however indicated that using a single supplier is in their view a more viable solution, since, inter alia the high technical standard which characterize these products can be more easily met by a single company in charge of the construction of the complete brake system.

26. As indicated above, the assemblers require the brake manufacturers to assume overall responsibility for the functioning of the brake. The effect of this requirement is that the bulk of brake systems purchases today are purchases of complete brake systems, supplied in each case by a single supplier. Today, complete brake systems account for around 80% of supplies, as compared with the situation ten years ago, when the figure was around 30%. This explains the high market shares which are currently held by the only two companies able to produce complete brake systems, namely Knorr-Bremse and Cardo. All customers and competitors contacted by the Commission have confirmed this picture, and that the trend towards the marketing of complete systems will continue in the future. It is in their opinion that this trend will continue in the future.

(2) Effects of the operation

27. It is not expected that the proposed concentration will result in the creation or strengthening of a dominant position of the parties on the market. Although the operation will strengthen Cardo's position, it will allow the new entity Cardo/Thyssen to compete more effectively against the current clear market leader Knorr-Bremse. Indeed, Cardo is at present a supplier of complete brake systems for different kinds of rolling stock. However, it has a weaker market position as regards discs (one of the possible mechanical parts of a brake system). Thyssen has a relatively strong position so far as discs are concerned. In addition, Thyssen is stronger in the countries where Cardo is weaker (mainly Germany and Austria). These increased market possibilities will allow Cardo to reach a position which is closer to that of Knorr-Bremse (which is strong on all the segments of the market).

28. Knorr-Bremse is the clear market leader in the EEA. It is the company with the widest experience in the sector. In the last few years it has enjoyed market shares similar to the ones currently held. However, its market share is constantly strengthened. Knorr-Bremse is a worldwide active company. Knorr-Bremse has traditionally been the dominant leader in the railway brakes industry in Europe. It is the company which can offer the widest product range. It is in addition a manufacturer of brakes for automotive vehicles.

29. This operation could increase the difficulties of the smaller competitors in competing effectively on the market. On the question whether there are other potential suppliers of complete brake systems besides the parties and Knorr-Bremse, virtually all the companies questioned by the Commission have indicated the British company Westinghouse Brakes. However, Westinghouse Brakes has to cooperate with producers of discs in order to be able to offer complete brake systems. All other competitors are basically producers of components of brake systems. Moreover, the market trend referred to above points to the necessity for operators on the market to be able to offer complete brake systems. In addition, even if these companies cannot be regarded as valid competitors to the parties and to Knorr-Bremse, they could probably still influence the market to a certain extent, and therefore at least represent a potential source of competition.

30. As indicated above, the customers of brake suppliers are the assemblers of rail vehicles. These assemblers include amongst the strongest European companies, i.e. ADtranz, Siemens, GEC Ahlstom. Other main assemblers are Fiat, Bombardier, Deutsche Waggonbau. Some 80% of rail vehicle production in the EEA is manufactured by these companies. As a result of the stiffer competition between rail vehicles manufacturers, as well as the pressure which is imposed on them by national railways, the pressure on the brake suppliers to cut costs has also risen. At the same time rail vehicle manufacturers, under the pressure of national railways, are increasing their standards as regards suppliers' product quality, prices, and research and development. For these reasons, the customers of brake suppliers increasingly prefer to deal with a single supplier of brakes. In their business relationships as regards brakes for rail vehicles, the assemblers are faced with companies which are much smaller in size and resources. This means that brake manufacturers are faced with very strong companies which can exercise a very strong buying power. The assemblers questioned have generally not indicated concerns about the proposed operation.

(3) Collective dominance

31. The market for brakes for rail vehicles is highly concentrated. Knorr-Bremse and the parties will have together EEA market shares between 60% and 80% dependent on the exact product market definition. These market shares have led the Commission to investigate the possible existence of collective dominance. Information and evidence collected by the Commission shows however that anticompetitive parallel behaviour as a result of the proposed concentration is unlikely[(1)].

32. The demand side of the market is highly concentrated and the companies in question have very strong buying power. They are able to influence their suppliers of brake systems, which are much smaller companies. Some of these companies might still have the expertise to develop brake systems in-house if necessary. In addition, several customers indicated that, in case of necessity, they would be able to buy a smaller supplier which could be able to supply the required brake systems with their support.

33. The most important criteria for the selection of brake suppliers are quality, reliability of supply, research and development -innovation- and price. In particular, brake systems for trains are customer-specified and thus heterogeneous products, given the importance of the requirements of the customers and the fact that generally the characteristics of each brake system which is sold have to be individually determined. This kind of individually negotiated contracts can also limit the transparency of the market. In addition, innovation plays a very important role. Indeed, since safety and high technical standards are becoming increasingly important, the specifications of the national railways, and consequently of the assemblers as concerns brake systems, are more and more demanding. This leads to an increased level of investments in research and development. This conclusion is supported by the investigation carried out.

34. The investigation carried out has also shown that Westinghouse Brakes is generally perceived as an alternative supplier for brake systems. Westinghouse Brakes appears to be strong especially in the UK. It has the ability to offer complete brake systems at least in cooperation with another supplier for those components that it does not produce itself. Therefore, Westinghouse Brakes represents a competitive alternative to Knorr Bremse and Cardo.

35. Moreover, the investigation has shown the absence of other kind of links between Knorr-Bremse and Cardo, and in the circumstances, it is not considered necessary to pursue this point further.

36. In light of these factors, the Commission concludes that the proposed operation will not lead to the creation or strengthening of a position of collective dominance as a result of which competition would be significantly impeded on the common market or a substantial part thereof.

b) Spare parts

37. Both parties are active on the after market, which consists basically of the sale of spare parts. Maintenance is excluded, as most of the national railways/local and regional transport authorities carry out maintenance in-house. The market structure for spare parts

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[(1)]See also cases No. IV/M.337 - Knorr-Bremse/Allied Signal and No. IV/M.726 - Bosch/Allied Signal.

is largely similar to that for original equipment. The combined market shares of the parties do not change substantially, whether by reference to the market for all spare parts, or the market for individual spare parts. Cardo's 1995 market share is between 20% and 30%. The parties have indicated that the competitive situation on this market is somewhere different to the position in the market for original parts. For the simpler spare parts it appears that the parties face competition from smaller companies which are active only on this market. For more complex parts, the situation is similar to that described for the original equipment (as the customers tend to buy these parts from the original supplier). The proposed concentration is therefore not likely to lead to the creation or strengthening of a dominant position on this market.

2. Wheels

38. The proposed operation will not lead to the creation or strengthening of a dominant position on the market for wheels. The parties combined market share will be less than 25%. Cardo's position on this market is insignificant (less than 1%). The only overlaps occur in Germany and in Austria. In the EEA, the parties face competition from stronger competitors which enjoy higher market shares: these companies include the French company Valdunes (23%), the Italian Lovere Lucchini (19%), the German VSG Verkehrstechnik (12%), the German ADtranz (6%).

VI. ANCILLARY RESTRAINTS

39. According to point 9.5 of Form CO, the parties have requested that certain clauses of their agreement be considered as ancillary to the concentration. To answer their request, the assessment made below also relates to the question of whether a provision is an integral part of the operation.

40. Section 13.3 of the Joint Venture Agreement provides that neither Cardo nor Thyssen may, except as provided for in Section 13.2. of the Joint Venture Agreement without the prior written consent of the other shareholder, transfer any of its shareholding in the JV prior to [...][(2)]. This clause reflects the long-lasting character of the concentration and can therefore be regarded as ancillary to the concentration.

41. Section 26.1. of the Joint Venture Agreement provides that Thyssen undertakes to Cardo that it and its Affiliates shall not, during the term of the Joint Venture Agreement and for [...][(3)] thereafter, without written agreement with Cardo, directly or indirectly invest, acquire an interest or otherwise be engaged in the railway business except as disclosed in exhibit 26.1. of the Joint Venture Agreement. Section 26.2. of the Joint Venture Agreement provides that subject to Section 26.3. of the Joint Venture Agreement, Cardo undertakes to Thyssen that it and its Affiliates shall not, during the term of the Joint Venture Agreement, without the written agreement with Thyssen directly or indirecty, invest, acquire an interest or otherwise be engaged in the Railway Business except as disclosed in exhibit 26.2. of the Joint Venture Agreement. These clauses confirm the reality of the lasting withdrawal of the parents from the scope of business assigned to the joint venture, and can therefore be recognised as an integral part of the concentration.

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(2) Deletd business secrets.

(3) Deleted business secrets. Not more than 5 years.

42. Section 26.4 of the Joint Venture Agreement contains an obligation of the parties not to divulge any information on a number of issues related to the JV. This clause is directly related and necessary to the implemention of the concentration. Therefore it can be regarded as ancillary to the concentration.

VII. CONCLUSION

43. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the functioning of the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation N° 4064/89.

For the Commission,