

***Case No COMP/M.4500 -  
NEMAK / TK  
ALUMINUM "A"***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004  
MERGER PROCEDURE**

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Article 6(1)(b) NON-OPPOSITION  
Date: 03/04/2007

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 03/04/2007

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE  
ARTICLE 6(1)(b) DECISION

**To the notifying party:**

Dear Sir/Madam,

**Subject: Case No. COMP/M.4500 – NEMAK / Teksid Aluminum "A"  
Notification of 23/01/2007 pursuant to Article 4 of Council Regulation  
No 139/2004**

1. On 28.01.2007, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004<sup>1</sup> ("the EC Merger Regulation") by which the undertaking Tenedora Nemark, S.A. de C.V. ("Nemark", Mexico) controlled by Alfa S.A.B. de C.V. (Mexico) acquires within the meaning of Article 3(1)(b) of the EC Merger Regulation sole control over several subsidiaries of Teksid Aluminum (together referred to as TK Aluminum "A").
2. After examination of the notification, the Commission has concluded that the notified operation falls within the scope of the EC Merger Regulation, 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**

3. The purchaser, Nemark, is a Mexico-based company, controlled by Alfa S.A.B. de C.V. (Mexico), internationally active in the production of aluminium castings for the automotive industry, with a strong focus on the production of cylinder heads and engine blocks. Within the EEA, Nemark achieved [the majority] of its turnover from the manufacture and supply of cylinder heads.

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<sup>1</sup> OJ L 24, 29.1.2004 p. 1

4. The target, TK Aluminum "A", is a carve-out of several production facilities of TK Aluminum (Bermuda) that produce castings for the automotive industry, including the production of cylinder heads and engine blocks. In Europe, the only plant subject to the acquisition is a plant located in Poland. [a large portion] of the EEA turnover is due to cylinder heads sales, whereas the rest of the turnover was achieved by the sale of other components to the car industry.

## **II. THE OPERATION**

5. According to the proposed transaction, Nemak acquires sole control by way of purchase of shares over Teksid Investment Aluminum B.V. (The Netherlands, including its subsidiaries in Mexico and China), Teksid do Brasil Alumínio Ltda. (Brazil), Teksid Aluminum Foundry Inc. (USA), Teksid Argentina S.r.l. (Argentina) and Teksid Aluminum Poland Sp.z.o.o. (Poland).
6. On this basis the Commission concludes that the proposed transaction constitutes a concentration within the meaning of Article 3(1) of the EC Merger Regulation.

## **III. COMMUNITY DIMENSION**

7. The concentration does not have a Community dimension within the meaning of Article 1 of the EC Merger Regulation. However, on 30.11.2006 the Commission received a referral request by means of a reasoned submission pursuant to Article 4 (5) of the EC Merger Regulation. None of the Member States competent to examine the concentration under its national competition law (namely Germany, Hungary and Poland) expressed its disagreement as regards the requested referral.
8. Consequently, the transaction is deemed to have a Community dimension pursuant to Article 4 (5) of the EC Merger Regulation.

## **IV. ASSESSMENT**

### **A. Relevant product market**

9. The proposed concentration will result in an overlap in the manufacture and supply of aluminium cylinder heads for the use in passenger cars and light commercial vehicles in the EEA. Both parties are also active in the manufacture and supply of aluminium engine blocks for the use in passenger cars and light commercial vehicles. Nemak had a market share of [5-15]% in the segment of aluminium engine blocks in the EEA. However, Teksid Aluminum "A" has not achieved any regular engine block sales in the EEA. Therefore, the market for engine blocks is not affected.<sup>2</sup>

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<sup>2</sup> In 2006, TK Aluminum "A" has produced sample engine blocks [...]

*a) Cylinder heads*

10. According to the notifying party, the relevant product market is the market for cylinder heads, including both aluminium and grey iron cylinder heads for the use in passenger cars and light commercial vehicles.<sup>3</sup>
11. The cylinder head is a key part to the performance of every internal combustion engine. It is a plate of metal, bolted to the top of the cylinder bank. Often the cylinder head is designed to accommodate the camshaft or another mechanism to transfer rotational mechanics from the crankshaft to linear mechanics to operate the valve. Internally, the cylinder head has passages called ports for the fuel/air mixture to travel to the inlet valves from the intake manifold, for exhaust gases to travel from the exhaust valves to the exhaust manifold, and for antifreeze (coolant) to cool the head and engine. Cylinder heads are made out of aluminium or grey iron cast.
12. The notifying party submits that there is one market including both aluminium and iron cylinder heads for the use in passenger cars and light commercial vehicles. However, as outlined in its recent decision, M. 4524 Nematik/Hydro Castings and confirmed by the market investigation in the present case, there are strong indications that grey iron cast cylinder heads do not form part of the relevant market.<sup>4</sup> Within the EEA, aluminium has almost completely substituted iron to the extent that only about 1% of cylinder heads are of grey iron. This substitution took place for technical as well as environmental reasons<sup>5</sup>, despite the fact that aluminium cylinder heads cost 50-90% more than grey iron cylinder heads.<sup>6</sup> Also car manufacturers do not see grey iron cylinder heads as an actual or potential substitute for aluminium cylinder heads. Moreover, there is no supply-side substitutability between the two types of cylinder heads, as grey iron cylinder heads are produced by different manufacturers with a different profile.
13. Based on the arguments above, the Commission considers that the production and sale of aluminium cylinder heads for the use in passenger cars and light commercial vehicles constitutes a separate relevant product market for the purpose of this decision.

*b) Engine blocks*

14. The engine block is the single largest component of the engine system and houses of all the operating elements of the engine, including cylinders and push rods. The engine

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<sup>3</sup> Cylinder heads for heavy vehicles differ in size and material. For heavy vehicles only grey iron cylinder head can be used which is produced by a different group of manufacturers than the parties and their competitors. None of the parties supply grey iron cylinder heads or grey iron engine blocks.

<sup>4</sup> In Case No. IV/M.139 VIAG/EB BRÜHL and in Case No. COMP/M.1189 TEKSID/NORSK HYDRO PRODUKSJON/MERDIAN the Commission has indicated that there might be separate market for grey and iron cylinder heads, but left the exact definition open.

<sup>5</sup> In particular, environmental regulations have driven the car manufacturers towards the use of aluminium in engines. Moreover, aluminum presents certain technical advantages, such as allowing for more fuel efficient engines and decreasing the weight of cars. It also has better transfer properties so that horsepower per engine liter is increased and allows more flexibility in the design.

<sup>6</sup> At present, the average price of an aluminium cast cylinder head is approximately 60 to 80 EUR, whereas the average price of a grey iron cast cylinder head is approximately 35 to 50 EUR. (Form CO, p.26)

block is a complex casting with adaptations to attach the cylinder head or cylinder heads, crankcase, engine mounts, drive housing and engine ancillaries.

15. The notifying party submits that there is one relevant product market for all engine blocks for the use in passenger cars and light commercial vehicles, aluminium and iron cast inclusive, for the use in passenger cars and light commercial vehicles, because they are from a consumer perspective highly substitutable.<sup>7</sup> It indicates that there are many examples of customers switching from iron cast to aluminium cast or vice versa.
16. The market investigation confirms to some extent the party's submission. Although there is no substitutability on the supply-side (aluminium engine block producers do not manufacture grey-iron engine-blocks), there is, on the demand-side, there is a significant degree of substitutability between aluminium and grey iron engine blocks for the use in passenger cars and light commercial vehicles. Contrary to cylinder heads, grey iron engine blocks are very much present in the market in particular for certain applications such as diesel engines for which grey iron engine blocks are more appropriate than aluminium engine blocks. Although certain car manufacturers opt exclusively for one or for the other, the majority of car manufacturers use both types of engine blocks for the use in passenger cars and light commercial vehicles. When deciding between the products, car manufacturers take into account technical characteristics and price.
17. However, the exact delineation between aluminium cast engine blocks for the use in passenger cars and light commercial vehicles and all engine blocks for the use in passenger cars and light commercial vehicles can be left open for the purpose of this decision, as the transaction will not result in a significant impediment of effective competition.

## **B. Relevant geographic market**

### *a) Cylinder heads*

18. The notifying party argues that the market for the production and sale of aluminium cylinder heads for the use in passenger cars and light commercial vehicles should be regarded as EEA-wide in scope. It bases its view on the fact that, within the EEA, customers buy independently from the location of the production facility, whereas actual imports to the EEA are very limited.
19. As in the recent decision M. 4524 Nematik/Hydro Castings, the Commission's current investigation clearly confirmed that the market for aluminium cast cylinder heads for the use in passenger cars and light commercial vehicles is EEA-wide in scope. The sales and quotation data that the Commission retrieved during its market investigation showed that car manufactures in the EEA source the vast majority of aluminium cylinder heads for their assembly facilities in the EEA from cylinder head production facilities that are also located in the EEA. Given the low transportation costs in relation to the price of the product and the duration of transport, there are various examples of cylinder heads and engine blocks that are shipped throughout the EEA.

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<sup>7</sup> Engine blocks for heavy vehicles differ in size. For heavy vehicles only grey iron engine blocks can be used which is not produced by the parties.

20. By contrast, there are still few imports from outside the EEA, as currently only approximately 3% of cylinder heads are shipped to the EEA. The importance of logistics explains to a large extent why car manufacturers tend not to import these products from outside the EEA. Indeed, transport duration may vary from 10 – 15 days to 5 weeks, which endangers the security of supply and increases the risk of quality problems during the assembly process in the car manufacturer's plant. Furthermore, according to certain respondents, oversee transportation costs might be substantial in relation to the price of the product.
21. Based on the above facts and arguments and in line with the previous decisions of the Commission, the geographic market for cylinder heads should be regarded for the purpose of this decision as being EEA-wide in scope.

*b) Engine blocks*

22. The notifying party argues that similarly to cylinder heads, the market for engine blocks for the use in passenger cars and light commercial vehicles should be regarded as EEA-wide in scope. It bases its view on the fact that, within the EEA, customers buy independently from the location of the production facility, whereas actual imports of engine blocks for the use in passenger cars and light commercial vehicles into the EEA are very limited. Approximately only 0,1% of the aluminium and less than 2% of the iron engine blocks supplies in the EEA are resulting from imports into the EEA
23. The market investigation brought indications that the market for engine blocks for the use in passenger cars and light commercial vehicles should indeed be regarded as EEA-wide. The purchasing behaviour of car manufacturers is to a large extent similar in this market as in the market for cylinder heads. Whereas car manufacturers sometimes organise global requests for quotations for their demands for engine blocks for the use in passenger cars and light commercial vehicles, they tend to actually source from EEA-based suppliers. Some car manufacturers only request quotations from engine block suppliers that are located on the same continent as the car manufacturer's engine production facility. Any foundry in the EEA can supply any engine assembly plant in the EEA within one or two days. The transport from outside the EEA into the EEA of at least 15 days is considerably longer. Some car manufacturers even indicated that the transport of engine blocks from outside the EEA into the EEA may take up to 60 days and would cost as much as 10% to 15% of the total end cost of the product.
24. Based on the above facts and arguments the geographic market for cylinder heads should be regarded for the purpose of this decision as being EEA-wide in scope.

**C. Competitive Assessment**

25. The market for the manufacture and supply of engine blocks for the use in passenger cars and light commercial vehicles does not constitute an affected market, since Teksid Aluminum "A" is not supplying any aluminium engine blocks for the use in passenger cars and light commercial vehicles in the EEA at present. The only overlap between the parties appears in the manufacture and supply of cylinder heads for the use in cars and light commercial vehicles.
26. When looking at supplies of "independent" cylinder head manufacturers, the parties' combined market share on the EEA-wide market for the supply of aluminium cylinder heads for the use in passenger cars and light commercial engines would amount to

approximately [35-45]%, with an increment of [5-10]%. Their major competitors are Montupet with a [20-30]% market share and Honsel ([5-10]%). There are also smaller independent suppliers such as Mazzucconi ([0-5]%), Group Arche SIFA ([0-5]%), and Fonderie Alluminio ([0-5]%).

27. However, these market shares overstate the actual position of the parties on the market. In this particular market, the internal foundries owned by the car manufacturers represent nearly 40% of the total European production. On the basis of total cylinder head production, the share of the merged entity would be around [20-30]% with an increment of only [0-5]% in the EEA market.
28. As in Case M 4524<sup>8</sup>, the Commission's investigation has confirmed that the car manufacturers' internal foundries exercise a significant competitive constraint on the independent cylinder head suppliers. Indeed, most of the car manufacturers apply a mixed sourcing model: between 50% and 90% of their cylinder head needs are covered by in-house production, whereas the remaining part of their needs is satisfied by independent suppliers. When ordering aluminium cylinder heads, car manufacturers treat their internal foundry during the negotiation period as any other external supplier. Internal foundries systematically participate in tenders placed by their respective car manufacturer and are considered to be as competitive as any other external supplier.<sup>9</sup>
29. In this particular market, internal foundries of the car manufacturers are equivalent to any independent supplier in terms of technical capabilities and are also competitive in price. In addition, internal foundries compete with independent suppliers of aluminium cylinder heads for the use in passenger cars and light commercial vehicles during the entire lifetime of the engine program. For example, a car manufacturer may shift a major portion of its cylinder head supplies for a certain engine program from an independent supplier to its own internal foundry. For these reasons, the independent cylinder head suppliers are thus subject to extensive competitive pressure from the car manufacturers' in-house production.
30. The Commission's investigation also indicated that there will remain sufficient free capacity available on the market and that the production capacity is expected to increase to at least 20% of the total EEA market in the foreseeable future due to plans of certain market players to expand their capacity.<sup>10</sup> Moreover, although two car manufacturers expressed the view that the merger might be negative for their businesses, others indicated that they would be able and willing to extend or even establish new production facilities in case of price increase, which should exert a further credible threat on the merging entity.
31. Finally, Nemak and TK Aluminum are not regarded as being close competitors in terms of quality, price and technical capabilities as customers rank Teksid relatively low in terms of reliability and quality, whereas Nemak and competitors such as Montupet and Honsel are generally ranked at a higher level.

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<sup>8</sup> Case No. Comp M.4524 Nemak/Hydro Castings

<sup>9</sup> Only one car manufacturer indicated that when selecting among tender participants, it takes into account that the internal foundry runs at full capacity.

<sup>10</sup> The increase in EEA capacity exceeds EEA 2% demand growth

32. In light of these elements, and in particular given the competitive constraint exercised by the car manufacturers' in-house production, the number and strength of the remaining competitors as well the minor increment of market shares resulting from the merger, the Commission concludes that the proposed transaction does not significantly impede effective competition in the common market on the market for aluminium cylinder heads for the use in passenger cars and light commercial vehicles.

## **V. CONCLUSION**

33. 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 EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission  
signed  
Neelie KROES  
Member of the Commission