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Case No COMP/M.1919 - ALCOA / CORDANT

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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, 19.05.2000

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PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying parties

Dear Sirs,

Subject: Case N° COMP/M.1919 – ALCOA / CORDANT
Notification of 11.4.2000 pursuant to Article 4 of Council Regulation No 4064/89

1. On 11.4.2000 the Commission received notification of a proposed concentration by which the U.S. undertaking Alcoa Inc. ('Alcoa') will acquire control of the U.S. undertaking Cordant Technologies Inc. ('Cordant').

2. The conclusion of the market investigation is that the operation falls within the scope of Council Regulation No 4064/89 and that it does not raise serious doubts as to its compatibility with the common market.

I. THE PARTIES

3. Alcoa is an integrated aluminium producer. On 4 May 2000, Alcoa merged its world-wide activities with the U.S. aluminium producer Reynolds.[1]

4. Cordant operates in three segments: (i) Cordant's Thiokol subsidiary supplies high technology solid rocket motors for space, defence and commercial launch applications; (ii) Cordant's Huck subsidiary supplies precision fastening systems for aerospace and industrial applications; and (iii) Cordant's Howmet subsidiary supplies investment cast turbine engine components for jet aircraft and industrial gas turbine power generation markets and investment casting for commercial aerospace and defence electronics industries.

II. THE OPERATION AND THE CONCENTRATION

5. The proposed transaction is structured as a tender offer and merger between Alcoa and Cordant, as a result of which Cordant will become as a wholly-owned subsidiary of

[1] Commission Decision of 3 May 2000 (Case No COMP/M.1693 – Alcoa/Reynolds)

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Alcoa. The transaction is a concentration within the meaning of Article 3(1)(b) of Council Regulation No 4064/89.

III. COMMUNITY DIMENSION

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 billion[2]. Each of Alcoa and Cordant have a Community-wide turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

IV. MARKET DEFINITION AND COMPETITIVE ASSESSMENT

7. The centre of gravity of the concentration is in the U.S., where Cordant's products are mainly supplied in the framework of government-funded military and aerospace programs. Owing to the complementary activities of the merging parties, the notified concentration will not result in any horizontal overlap. Consequently, there are no horizontally affected markets within the meaning of Section 6 III (a) of Form CO.[3]

8. The concentration will result in several vertically affected markets within the meaning of Section 6 III (b) of Form CO, stemming from Cordant's casting activities (downstream) and Alcoa's aluminium metal and white corundum powder activities (upstream).

9. Cordant's Howmet subsidiary supplies components made by the investment casting process for three principal applications: (i) airfoils; (ii) aerospace engine structural components; and (iii) airframe structural components.

A. Airfoils – Aluminium metal

Product market definition

The downstream market (airfoils)

10. Airfoils are parts or surfaces which control the stability, direction, lift, thrust or propulsion of an aircraft. Structural parts are safety critical components of an aircraft that are integral to and make up part of the frame or structure (either engine or airframe). Airfoils are used in either aerospace (e.g., jet or turboprop engines) or industrial (e.g., utility generator) applications. They are produced from super-alloys using a casting process. In varying quantities, the metals used in super-alloys are nickel, cobalt, iron and chromium. Aluminium metal is used as alloying element in quantities representing 5% or less of the total metal content. Turbine airfoils must be produced to demanding specifications determined by the OEM customer, due to the typically corrosive, high temperature, high stress and high performance environments in which gas turbine airfoils must operate. Although a distinction between aerospace airfoils and

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[2] Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25). To the extent that figures include turnover for the period before 1.1.1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

[3] Form CO relating to the notification of a concentration pursuant to Regulation (EEC) No 4064/89

industrial airfoils could be made, both from a demand and from a supply-side substitutability viewpoint, the precise product market definition can be left open, insofar as the concentration does not raise serious doubts as to its compatibility with the common market, under any possible product market definition.

The upstream market (aluminium metal)

11. In previous Commission decisions[4], aluminium metal was found to constitute a distinct product market. To the extent that aluminium metal may be used, even in minor quantities, in the manufacture of airfoils, it constitutes a vertically related market to that of airfoils.

Geographic market definition

The downstream market

12. Airfoils are high value added products which can travel long distances in an economical manner. Interstate and intercontinental trade flows are frequent and represent up to 50% of the total trade in this market. However, the exact geographic market definition may remain open, as the concentration will not raise serious doubts as to its compatibility with the common market, under any possible geographic market definition (world-wide or EEA-wide).

The upstream market

13. In accordance with previous Commission decisions (see footnote 4 above), aluminium metal is traded on a world-wide basis and may be considered as a world-wide market. However, to the extent that producers located in areas formerly referred to as the eastern World (CEEC's, CIS, China, etc.) may not be viewed as equally reliable suppliers as their Western World counterparts, the present analysis assesses the vertical effects of the concentration on the basis of both a Western World and a Total World aluminium metal market.

Assessment

14. Cordant's Howmet subsidiary is the leading supplier of cast airfoils for aerospace and industrial applications. Cordant's Howmet 1999 market shares in airfoils for aerospace applications are [45%-55%] world-wide and [45%-55%] EEA-wide; its 1999 market shares for industrial airfoils are [65%-75%] world-wide and [65%-75%] EEA-wide. Its principal competitors for aerospace airfoils are Precision Castparts/Wyman Gordon (market share of approx. [40%-50%] world-wide and in the EEA) followed by two smaller suppliers, Ishikawajima-Harima Precision Casting Company and Precicast, the latter two sharing the remaining part of that market. Cordant's Howmet's principal competitors for industrial airfoils are Doncaster (market share of approx. [15%-25%] world-wide and in the EEA) and Precision Castparts/Wyman Gordon (market share of approx. [5%-15%] world-wide and in the EEA).

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4 Alcoa/Alumix (case N° IV/M.675, Decision of 21 December 1995; OJ C121, 25.4.1996, p. 14); Alcoa/Inespal (case N° IV/M.1003, Decision of 24 October 1997; OJ C29, 27.1.1998, p. 7)

15. Alcoa is a producer of aluminium metal. After its acquisition of Reynolds Metals Company (see paragraph 3 above), Alcoa accounts for [15%-25%] of the 1999 Western World's aluminium metal capacity and [10%-20%] of Total World aluminium metal capacity. Its main competitors include Alcan/Alusuisse[5] ([5%-15%] of Western World's capacity; [5%-15%] of Total World capacity – Alcan's individual shares are [5%-15%] and [5%-15%], respectively), Pechiney ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity), Billiton ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity) and others.

16. As mentioned in paragraph 10 above, airfoils are not made of aluminium, but of harder metal alloys. Aluminium may only be used as an alloying element in quantities representing 5% or less of the total metal content, but not as the basic component of the alloy. Howmet's share in the demand/consumption of aluminium metal is well below [0%-5%] world-wide or in the EEA. In addition, as a consequence of the low market shares of Alcoa in the supply of aluminium metal and of the low content of aluminium in the production of aerospace or industrial airfoils, the vertical relationship between Alcoa and Cordant's Howmet subsidiary will not result in any vertical foreclosure; more particularly, the transaction, through the elimination of Cordant as a purchaser of aluminium metal, will not lead to foreclosure effects on the aluminium market; nor will it enable the merged firm to eliminate to an appreciable degree a source of supply of aluminium input to competing producers of airfoils.

B. Aerospace Engine Structural Castings – Aluminium metal

Product market definition

The downstream market (aerospace engine structural castings)

17. Aerospace engine structural castings are metal cast components used to host engine or other mechanical parts of an aerospace engine. Some examples of aerospace engine structural castings include bearing houses, compressor cases, fan frames, diffuser cases and turbine exhaust cases. Aerospace engine structural castings are made of super-alloys, titanium and aluminium. The parties suggest that aerospace engine structural castings form a single product market. An alternative market definition could, however, distinguish castings on the basis of the metal out of which they are made – for instance, titanium aerospace castings, aluminium aerospace castings, etc. This may be appropriate to the extent that titanium aerospace castings have properties that are different from aluminium aerospace castings in terms of strength, heat resistance, fatigue, etc. Nevertheless, since under the narrowest possible product market definition, the concentration will not raise doubts as to its compatibility with the common market, the precise product market definition may be left open.

The upstream market (aluminium metal)

18. To the extent that aerospace engine structural castings may be made of aluminium, the latter constitutes a vertically related (upstream) market. Its description is given in paragraph 11 above.

Geographic market definition

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5 Commission Decision of 14 March 2000 (Case No COMP/M.1663 – Alcan/Alusuisse)

The downstream market

19. Aerospace engine structural castings are high value added products which can travel long distances in an economical manner. Interstate and intercontinental trade flows are frequent and represent up to 30% of total trade in this market. However, the exact geographic market definition may remain open, as the concentration will not raise serious doubts as to its compatibility with the common market, under any possible geographic market definition (world-wide or EEA-wide).

The upstream market

20. Aluminium metal may be viewed as a world-wide (or Western world) market, according to the description in paragraph 13 above.

Assessment

21. Cordant Howmet's market shares in aerospace engine structural castings are approximately [5%-15%] world-wide (in which case the concentration does not result in a vertically affected market) and [20%-30%] in the EEA. Its principal competitor, Precision Castparts/Wyman-Gordon has a market share of [50%-60%] in the EEA (approx. [35%-45%] world-wide), the remaining part of the market being shared among Precicast, Teledyne and Formetal.

22. As mentioned in paragraph 15 above, Alcoa is a producer of aluminium metal and - after its acquisition of Reynolds Metals Company - accounts for [15%-25%] of the 1999 Western World's aluminium metal capacity and [15%-25%] of Total World aluminium metal capacity. Its main competitors include Alcan/Alusuisse ([5%-15%] of Western World's capacity; [0%-10%] of Total World capacity – Alcan's individual shares are [5%-15%] and [0%-10%], respectively), Pechiney ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity), Billiton ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity) and others.

23. Howmet's share in the demand/consumption of aluminium metal is well below [0%-5%] world-wide or in the EEA. In addition, as a consequence of the low market shares of Alcoa – the upstream supplier – and Cordant – the downstream user – in the vertically related aluminium/aerospace engine structural castings markets, the concentration will not result in any vertical foreclosure; more particularly, the transaction, through the elimination of Cordant as a purchaser of aluminium metal, will not lead to foreclosure effects on the aluminium market; nor will it enable the merged firm to eliminate to an appreciable degree a source of supply of aluminium input to competing producers of aerospace engine structural castings.

24. In the event that the relevant product markets were titanium aerospace engine structural castings, on the one hand, and aluminium aerospace engine structural castings, on the other, the concentration would not give rise to any serious doubts as to its compatibility with the common market. Cordant's market share in titanium aerospace engine structural castings is [10%-20%] world-wide (in which case the concentration does not result in a vertically affected market) and [20%-30%] EEA-wide. However, to the extent that Alcoa is not a current or potential supplier of titanium, the notified concentration will not result in any vertical relationship between the merging parties. Furthermore, Cordant's market share in aluminium aerospace engine structural castings

is [15%-25%] world-wide and [15%-25%] EEA-wide, in which case the concentration does not result in a vertically affected market.

C. Airframe Structural Castings – Aluminium metal

Product market definition

The downstream market (airframe structural castings)

25. Airframe structural castings are metal cast components used to host mechanical parts of an aircraft, other than the engine of the aircraft (see aerospace engine structural castings in paragraph 17). Some examples of airframe structural castings include APU (auxiliary power units), ducts, transmission adapters, heat shields, bulkheads, flaptracks, sides of bodies, etc. Due to the less requiring environment within which airframe castings have to operate – as opposed to aerospace engine castings – these may be made of a variety of metals, including aluminium. However, there is no need to further delineate the relevant product market on the basis of the specific metal used, as even under the narrowest possible market definition, the operation does not raise any serious doubts as to its compatibility with the common market.

The upstream market (aluminium metal)

26. To the extent that airframe structural castings may be made of aluminium, the latter constitutes a vertically related (upstream) market. Its description is given in paragraph 11 above.

Geographic market definition

The downstream market

27. Airframe structural castings are high value added products which can travel long distances in an economical manner. Interstate and intercontinental trade flows are frequent and represent up to 40% of total trade in this market. However, the exact geographic market definition may remain open, as the concentration will not raise serious doubts as to its compatibility with the common market, under any possible geographic market definition (world-wide or EEA-wide).

The upstream market

28. Aluminium metal may be viewed as a world-wide (or Western world) market, according to the description in paragraph 13 above.

Assessment

29. Cordant Howmet's market shares in airframe structural castings are approximately [55%-65%] world-wide (mainly sales in the USA) and [20%-30%] in the EEA. Its main competitors and their corresponding market shares are Precision Castparts/Wyman-Gordon (approx. [25%-35%] world-wide and EEA-wide), Tital ([15%-25%] EEA-wide) and Aeromet ([20%-20%] EEA-wide).

30. As mentioned in paragraph 15 above, Alcoa is a producer of aluminium metal and - after its acquisition of Reynolds Metals Company - accounts for [15%-25%] of the 1999 Western World's aluminium metal capacity and [10%-20%] of Total World

aluminium metal capacity. Its main competitors include Alcan/Alusuisse ([5%-15%] of Western World's capacity; [0%-10%] of Total World capacity – Alcan's individual shares are [%] and [%], respectively), Pechiney ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity), Billiton ([0%-10%] of Western World's capacity; [0%-10%] of Total World capacity) and others. Under these circumstances, the Commission considers that the operation does not raise serious doubts in the aluminium airframe structural castings market.

31. Even taking a narrower product market definition (titanium airframe structural castings, on the one hand, and aluminium airframe structural castings, on the other), the concentration would not give rise to any serious doubts as to its compatibility with the common market. Cordant's market share in titanium airframe structural castings is approx. [20%-30%] world-wide and below [20%-30%] EEA-wide (in the latter case the concentration does not result in a vertically affected market). However, to the extent that Alcoa is not a current or potential supplier of titanium, the notified concentration will not result in any vertical relationship between the merging parties. Furthermore, Cordant's market share in aluminium airframe structural castings is below [15%-25%] world-wide and EEA-wide, in which case the concentration does not result in a vertically affected market.

32. Howmet's share in the demand/consumption of aluminium is well below [0%-5%] world-wide or in the EEA. In addition, as a consequence of the low market shares of Alcoa in the supply of aluminium metal, the vertical relationship between Alcoa and Cordant's Howmet subsidiary will not result in any vertical foreclosure; more particularly, the transaction, through the elimination of Cordant as a purchaser of aluminium metal, will not lead to foreclosure effects on the aluminium market; nor will it enable the merged firm to eliminate to an appreciable degree a source of supply of aluminium input to competing producers of airframe structural castings.

D. White Corundum Powder

Product market definition

33. White corundum powder, such as tabular alumina, is one of the materials used in the casting process. More particularly, it is used in the ceramic slurries and stucco to put around the wax pattern (moulds) used to produce cast products, including airfoils, aerospace engine structural castings and airframe structural castings. White corundum powder represents less than 1% of the total cost of the casting production. There are alternative products that can be used for the same application, such as various chemically produced compounds. Moreover, white corundum is used in many other applications, such as in refractories, ceramics and abrasives (not produced by Howmet). Therefore, although there appears to be no specific market for white corundum used in the casting process, the precise market definition may be left open as under the narrowest possible alternative definition, the concentration will not raise serious doubts as to its compatibility with the common market.

Geographic market definition

34. White corundum powder can travel long distances under economic conditions. A large part of the total world trade is intercontinental. However, the precise geographic market definition, world-wide or EEA-wide, may be left open as under any possible market

definition, the concentration is not likely to raise serious doubts as to its compatibility with the common market.

Assessment

35. Insofar as Alcoa is a producer of white corundum powder and Cordant's Howmet uses this product in its casting operations, the concentration results in a vertical relationship. Cordant Howmet's share in the demand/consumption of white corundum powder is less than [0%-5%] of total world-wide demand of white corundum powder. Alcoa has a market share of [25%-35%] in world-wide sales of white corundum powder and of [35%-45%] of EEA sales. However, Howmet only buys white corundum powder in the US, where it is located. There are a number of competing suppliers of white corundum powder such as Treibacher (Austria) with [15%-25%] EEA-wide market share, Pechiney (France) with [10%-20%], Surfatec (Germany) with [0%-10%], Alufin GmbH (Germany) with [0%-10%], Motim (Hungary) [0%-10%], and some Russian suppliers representing [0%-10%] of the EEA demand. None of these competing suppliers is vertically integrated downstream to produce investment castings in competition with Howmet. The market investigation showed that these suppliers have sufficient spare capacity of white corundum and are thus capable of supplying competitors of Cordant's Howmet in the downstream casting applications. Moreover, these competitors view the above mentioned suppliers as substitutable to Alcoa from a quality viewpoint. As a consequence, the vertical relationship between Alcoa and Cordant's Howmet subsidiary will not result in any vertical foreclosure; more particularly, it will not enable the merged firm to eliminate to an appreciable degree a source of supply of white corundum powder to competing producers of cast products, nor will it will not lead to foreclosure effects on the white corundum powder market, through the elimination of Cordant as a purchaser of that product.

V. CONCLUSION

36. 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 (EEC) No 4064/89.

For the Commission,