

2 Conclusions

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The reference

2.1. Under the reference (see Appendix 1.1) dated 15 July 1999, made under sections 64 and 69(2) of the Fair Trading Act 1973 (the Act), we are required to investigate and report on whether a merger situation qualifying for investigation has been created in that enterprises carried on by or under the control of Alanod have, within the four months preceding this reference, ceased to be distinct from enterprises carried on by or under the control of Ano-Coil, a UK subsidiary of Metalloxyd GmbH. If we find that either the share of supply test or the assets test (referred to in section 64(1)(a) and (b) respectively of the Act) is satisfied, the reference required us to exclude the other from our consideration.

2.2. Particular features of this reference are that the two principal companies are both German-owned, and that the acquisition had already taken place, on 17 March 1999. Representations on the merger had been made to the Office of Fair Trading (OFT) on 26 March

by a customer of Ano-Coil. The Lighting Industry Federation (LIF) also raised the matter with the OFT.

2.3. [

Details omitted. See note on page iv.

] On 19 March, Alanod's legal advisers informed the OFT that Alanod had completed the acquisition of Ano-Coil on 17 March as a consequence of an agreement made on the same day.

2.4. Following discussions between the OFT and Alanod after the reference, Alanod gave certain undertakings to the OFT on 11 August. These included an undertaking to maintain Ano-Coil as a separate operating unit pending the outcome of this inquiry. Alanod told us that it had informed the OFT that, as a result of changes which had already occurred and of which the OFT was aware, Ano-Coil was no longer in a position to operate as a stand-alone entity.

The technical background

2.5. This reference is concerned with a specialist sector of manufacturing industry; both Alanod and Ano-Coil process sheet aluminium in coil form in order to meet the requirements of the lighting industry. They have no other significant products and few other significant customers. Our investigation focused on anodized aluminium coil used for its reflective properties by the lighting industry. Its primary use is as a material for reflective components of light fittings (luminaires) predominantly for the commercial market.

2.6. The technical Appendix 4.2 and the report of our consultants, W S Atkins PLC (W S Atkins), Appendix 4.3, set out the main technical issues relevant to this reference. The processes involved are required to produce aluminium of a high and lasting reflectivity and specularity (ie its image-reflecting, or mirror-like, qualities). Materials with such qualities are important in commercial lighting, in particular to enable lighting designers to meet regulatory requirements, while minimizing energy use.

2.7. Anodizing is an electrolytic process which develops a hard protective surface layer of aluminium oxide on aluminium—for these applications, aluminium of high purity. For the purposes of this reference we are concerned only with the process whereby anodized aluminium is produced in coil form. The process is generally limited to producing reflectivities of around 84 to 87 per cent. Higher levels can be achieved (at higher cost), most notably at present by the process of vacuum deposition on an existing anodized aluminium substrate. Such materials (the MIRO product range of Alanod), and their effect on the top end of the anodized aluminium market for lighting applications, are considered later in this report.

The companies involved in the merger

Alanod

2.8. A detailed account of Alanod before the merger is set out in paragraphs 3.5 to 3.19. In short, it was a technologically strong, profitable, company with a strong market presence in the UK and in Europe (see Chapter 4). In 1998 it exported from Germany about 80 per cent of its production.

2.9. Alanod has anodizing plants at Wuppertal in Germany and at nearby Ennepetal, where there is also a vacuum deposition facility for the production of the company's MIRO product range. Total production capacity of anodized aluminium is around [] tonnes a year. Alanod also has a total of some [] tonnes a year capacity for the MIRO product range, although this does not add to the [] tonnes a year where Alanod's own pre-anodized aluminium is used as the substrate for the MIRO process. The vacuum deposition

capacity currently considerably exceeds market demand for MIRO by a factor of about [30], but Alanod is seeking to develop a broader market by extending the use of the vacuum deposition process to substrates consisting of cheaper, lower-quality material than the pre-anodized aluminium currently required.

2.10. In 1998, sales of Alanod material accounted for 35 per cent of sales in the UK of all grades of anodized aluminium used for lighting applications and just over 40 per cent of sales of specular grade material (see Table 4.1). In EC markets as a whole (including the UK) Alanod estimated that its 1998 market share with respect to specular grade material was about 37 per cent and its corresponding share in the worldwide market was about 31 per cent (see Table 4.2).

2.11. Alanod is also associated with the manufacture of lighting louvres in the UK through Jordan—a specialized louvre maker largely owned by Jordan Reflectoren GmbH. Jordan Reflectoren GmbH is owned by two individuals who own together [30] per cent of Alanod (see paragraph 3.5). Alanod told us that it dealt with Jordan on an arm's length basis.

Ano-Coil

2.12. The history and position at the point of acquisition of this company is set out in detail in paragraphs 3.20 to 3.47. Its parent Metalloxyd GmbH had been under bank control since 1997.

2.13. In 1998, Ano-Coil had production capacity of about [30] tonnes a year at Milton Keynes and [30] tonnes at Bletchley, together with a slitting facility at Aldridge in the West Midlands. Its parent had further capacity in Cologne of approximately [30] tonnes. The Cologne lines were closed in December 1998. More than 90 per cent of Ano-Coil's production went to the lighting industry and it exported approximately 80 per cent, about [30] of which went via its German parent.

2.14. In 1998, Ano-Coil accounted for just over 40 per cent of sales in the UK of all grades of anodized aluminium used for lighting applications and nearly 47 per cent of sales of specular grade material (see Table 4.1). In EC markets as a whole (including the UK), Alanod estimated that Ano-Coil's 1998 market share with respect to specular grade material was 31 per cent and its corresponding share in the worldwide market was 16 per cent (see Table 4.2).

2.15. [

Details omitted. See note on page iv.

]

2.16. Ano-Coil's German former parent declined to provide us with copies of its accounts. Ano-Coil's reported turnover in 1998 was £24 million, its operating profit £287,000, and loss before tax (and before minority interests) was £206,000. The high level of trading between the parent and Ano-Coil meant that Ano-Coil's trading results as a UK corporate entity would have been largely under its parent's control.

2.17. At the time of the merger Ano-Coil was in a financially weak state. The building of Ano-Coil's Milton Keynes plant in 1992 had been financed by bank loans; Ano-Coil's cash flow was inadequate both to service the borrowings and to invest in keeping its plant up to date. In 1993 Metalloxyd GmbH and Ano-Coil had begun an unsuccessful diversification into louvre manufacture through a subsidiary Metaprint Ltd. This never made a profit before its assets were disposed of, at a loss, in 1998 (see paragraph 3.29). In that year, the recession in the Far East market contributed to a reduction in Ano-Coil's sales of some 25 per cent, leading to a financial loss for the second year running. At the end of 1998, Metalloxyd GmbH and its subsidiaries

including Ano-Coil (the Metalloxyd group) completed a reconstruction involving the closure of its production facilities in Cologne referred to in paragraph 2.13 and the transfer of all anodized aluminium production to the UK, where production costs were 30 per cent lower than in Cologne. Ano-Coil was budgeting for a pre-tax profit of £1.7 million for 1999, even after carrying certain German costs such as the cost of the Sales Director and other staff, and a distribution centre which remained in Cologne. The Metalloxyd group had decided, however, that it could not provide the resources necessary to secure Ano-Coil's medium- and long-term future and that its best course would be to sell Ano-Coil as a going concern.

The merger situation

2.18. In the light of its doubts over Ano-Coil's future we understand that Metalloxyd GmbH made an initial approach to Alanod in mid-1998 with a view to merging the two companies, with their respective owners retaining their interests. This was rejected by Alanod. We were told that discussions were also held with other unnamed potential investors, but to no avail. In the autumn of 1998, contact was renewed with Alanod with a view to an outright sale. A sale was finally completed on 17 March 1999 under an agreement made on the same day. The detailed sequence of the acquisition discussions is set out in paragraphs 3.48 to 3.51.

2.19. [*Details omitted. See note on page iv.*
] Thus the agreement effectively related only to Milton Keynes and its associated distribution and slitting activities. The price was DM[*⊗*] million and Metalloxyd GmbH [*Details omitted. See note on page iv.*
]

2.20. The outcome has been to place some 75 per cent of the UK market for pre-anodized aluminium for the lighting industry in the hands of Alanod. It has also taken some [*⊗*] tonnes of capacity out of production in addition to Metalloxyd GmbH's removal of [*⊗*] tonnes of capacity in its rationalization programme in 1998. Following the acquisition further rationalization took place within the enlarged Alanod group. Ano-Coil's technical, marketing and sales operations were, for the most part, closed, and the opportunity quickly taken for economies to be made in production costs and efficiencies in plant operation. This strengthened Alanod's competitive position within the market.

Jurisdiction

2.21. Our terms of reference (see Appendix 1.1) require us to report on whether a merger situation qualifying for investigation has been created as a result of the acquisition, and if so whether the creation of that situation operates, or may be expected to operate, against the public interest.

2.22. In order to determine whether a merger situation qualifying for investigation has been created, we need to consider several factors. First, as described in paragraph 2.18, Alanod acquired the issued share capital of Ano-Coil under the agreement of 17 March 1999, ie within four months preceding the date of the reference, and it is clear that as a result of the agreement the enterprises carried on by Ano-Coil and those carried out by Alanod are under common control and hence have ceased to be distinct within the meaning of the Act.

2.23. We next have to consider whether either the value of the assets which have been taken over exceeds £70 million (the assets test), or the merger will create or enhance a share of at least one-quarter in the supply of goods of any description in the UK, or a substantial part of the UK (the share of supply test).

2.24. The assets test is not met in this case, since the assets of Ano-Coil do not meet the £70 million threshold. We discuss in paragraphs 2.39 to 2.57 the relevant market for the purposes of this reference, and conclude that it is the UK market for all grades of anodized aluminium coil, plus Alanod's MIRO range, which provides the appropriate definition. We set out the market shares in paragraph 4.60. We are satisfied that with 75 per cent by value of the UK market currently being held by the merged companies, as compared with Alanod's 35 per cent share before the merger, the share of supply test is met. Alanod accepted that the share of supply test was met. We therefore conclude that there is a merger situation qualifying for investigation as set out in our terms of reference.

The market sectors concerned

Aluminium anodizing

2.25. Coil anodizing is a specialized business. Ano-Coil is the only aluminium coil anodizer in the UK, and until the acquisition it and Alanod were by far the two largest participants in the UK market. Other companies exist within Europe, and sell in the UK—SATMA (Société Anonyme de Traitement des Métaux et Alliages, a subsidiary of Pechiney) in France and SACALL SpA (SACALL), a privately-owned company in Italy. Neither of them, however, had a presence in the UK market anywhere near in size to that of either Alanod or Ano-Coil separately.

2.26. Coil anodizing is also undertaken in the USA. Prior to the merger Lorin Industries Inc (Lorin) claimed to be the world market leader in terms of volume. The other US company with a market presence in the UK was Aluminium Coil Anodizing Corporation (ACA). We have noted that the US companies have achieved only a modest penetration of the UK market.

2.27. The suppliers—both European and those from the USA—are described in more detail in paragraph 4.17.

The lighting industry

2.28. The lighting industry is highly fragmented, characterized mainly by small companies. There are very few major luminaire manufacturing companies in Europe—the largest are Thorn Lighting Group Limited (Thorn) and Koninklijke Philips Electronics NV (Philips), although Philips does not manufacture luminaires in the UK. Thorn has its main EC plant for making indoor lighting at Spennymoor, County Durham. As a result, Thorn is by far the largest end-user of anodized aluminium lighting sheet in the UK, accounting for just over 20 per cent of estimated total usage. The next largest is Crompton Lighting Limited (which accounts for about 7 per cent of the UK demand for anodized material), followed by Fitzgerald Lighting Limited and Tamlite Lighting Ltd, each of which takes about 3 per cent. There are also many smaller specialist companies, each of which accounts for less than 1 per cent. In addition, we identified two substantial luminaire manufacturers, Dextra Lighting Systems plc (Dextra) and Key Lighting Limited (Key), which use raw (unanodized) aluminium as their preferred material and are not significant users of the anodized product (see paragraphs 2.46 and 2.47). Luminaire manufacturers are described in more detail in Chapter 4.

2.29. The luminaire manufacturers also buy in aluminium louvres from specialist louvre makers, often on the basis of competitive tender. In the UK, the main louvre makers in order of size are (see paragraphs 4.32 to 4.35) Jordan (linked to Alanod as referred to in paragraph 2.11), Lighting and Ceiling Louvres Ltd (LCL), Interlux Limited (Interlux) and Precision Louvre Company.

2.30. Anodized aluminium represents a significant element of the costs of both luminaire and louvre manufacturers. Across all types of luminaire using coil anodized aluminium, the material appears to account for around 25 per cent of total production costs, though it can be as high as 40 to 50 per cent for the lower-priced luminaires. For the specialist louvre makers, the aluminium used can account for around 75 per cent of such costs.

2.31. In the UK many of the companies—both luminaire and specialist louvre manufacturers—are represented by their own specialist trade association, the LIF. The LIF told us that the industry was passing through difficult times, and existence for many companies was precarious.

Distribution

2.32. The nature and structure of distribution has been an important feature of this inquiry. As explained in more detail in paragraph 4.18, distribution functions relating to the supply of anodized aluminium include:

- price setting, marketing and sales administration;
- service elements such as cutting and packaging;
- stockholding;
- delivery, often on a just-in-time basis; and
- customer and, to a lesser extent, technical support.

So far as we are aware no sales were made to independent, non-exclusive wholesalers or general metal stockholders.

2.33. Prior to the merger, Ano-Coil undertook these distribution functions itself for all sales in the UK market from its two production facilities and also from its service centre in Aldridge, in the West Midlands. Its sales and distribution in certain markets outside the EC were handled through its own subsidiaries (for example, in Hong Kong, South Africa and Australia), or appointed agents, which had exclusive rights of distribution in particular countries or territories. Its sales to EC markets, other than the UK, and to the USA were all handled through Metalloxyd GmbH.

2.34. Outside the UK, Alanod sold either direct to end-users or through its own appointed agents, which had exclusive rights of distribution in particular countries or territories. On the other hand, in the UK, Alanod made nearly [80] per cent of its sales in the UK through Thyssen Garfield Ltd (Thyssen) under a long-established exclusive distribution agreement which lasted until the end of July 1999, although notice to terminate had been given late in 1998. Under this agreement Thyssen acted as a principal—purchasing its anodized aluminium supplies exclusively from Alanod, reselling to customers in the UK, and carrying out most of the functions listed in paragraph 2.32. Nonetheless, under the terms of the agreement, Alanod was permitted to sell material direct to two UK louvre manufacturers: Jordan and LCL. Such sales accounted for [20] of Alanod's 1998 sales in the UK. Paragraph 4.21 records differences of opinion between Thyssen and Alanod over the extent to which Alanod had direct contact with Thyssen's customers of Alanod material, and ability thereby to influence final prices.

2.35. Indeed, Alanod told us that a significant part of its rationale for the takeover of Ano-Coil had been that it had become dissatisfied with Thyssen in recent years, and that it viewed

the Ano-Coil takeover inter alia as a means of securing what it saw as improved distribution in the UK for Alanod products. Thyssen confirmed to us that there had been disagreements over various matters, but told us that when Alanod had first given notice to terminate the agreement it had indicated that it wished to do so because it was planning to take over Ano-Coil.

2.36. In the event, the agreement was formally terminated at the end of July 1999, by which time Thyssen had agreed with SACALL to become its exclusive distributor in the UK. SACALL had previously sold direct to its only customer in the UK, Interlux (the third largest specialist louvre maker, which we note has been placed into administration). [*Details omitted. See note on page iv.*] It felt that many customers would be interested in an alternative source of supply to that of Alanod, because of Alanod's post-merger market dominance. By the beginning of November 1999, however, it had secured only limited volumes of sales.

2.37. As for other suppliers, SATMA sells in the UK exclusively through Cashmore Amary Metals Limited (Cashmores, a UK-based metals stockholder) which, like Thyssen, acts as a principal. Lorin and ACA, on the other hand, both have their own subsidiaries in the UK which undertake on an exclusive basis all sales of their respective products to the UK lighting sector.

2.38. Prior to the merger, therefore, the producers of anodized aluminium material supplying the UK market distributed their products in the lighting sector either directly or through a single, selected organization. In part, these narrow channels of distribution from producer through to end-user reflect the relatively small size and specialist nature of demand. But as explained in Chapter 4, this structure has certain implications for competition in the UK market that are relevant to our inquiry. First, it results in producers having considerable knowledge of, and direct commercial contact with, users of their product. Secondly, it can afford producers the opportunity for considerable control over the structure and level of prices charged to individual users; and indeed, enables them to charge different prices (for the same material) to different users, because of the lack of price transparency (see paragraph 4.66). Thirdly, the combination of these factors means that producers can, if they choose, set different prices on average in different national markets.

Market definition

2.39. Chapter 4 seeks to define the relevant product and geographic market (or markets) where the two main parties operate, and where competition might be affected. As is customary in reports by the CC the relevant market is defined in general terms as comprising that group of products for which there are no close economic substitutes on either the demand side or on the supply side.

2.40. Our natural starting point has been to consider anodized aluminium coil—since both main parties are specialized producers of this material—and the lighting sector applications for which the largest proportion of this material is used. Each of the suppliers to the UK market offers a range of different product types or grades of specular and non-specular material (all or most of which are used by the lighting sector), each with its own specified properties (surface finish, reflectance, diffusion characteristics, iridescence etc; see Appendix 4.1). Alanod supplies over 20 such product grades of conventional anodized aluminium (together with about six grades of MIRO). Where different manufacturers' product types or grades offer similar properties, they are likely to be direct substitutes on the demand side, in that they are both technical and economic alternatives for a given application. Such potential for substitution appears to apply within the full range of conventional specular material.

2.41. The non-specular finishes available (matt and ridged, for example), while substitutes for each other to varying degrees, are not obviously direct substitutes on the demand side for specular material. They are typically used for different, though related, applications, often as

complementary materials within a louvre assembly. However, both specular and non-specular grades can be produced on the same production line. We therefore consider them to be close economic substitutes on the supply side. That is, existing producers of anodized material are in general able to switch production from one grade to another in response to market signals, whether these be changes in the pattern of demand for different grades or shifts in relative prices between different grades. Overall, therefore, we take all grades of conventional coil anodized aluminium (whether specular or non-specular) to be within the same product market.

2.42. We considered also whether or not Alanod's vacuum deposition (MIRO) products could be regarded as substitutes on the demand side for conventional anodized lighting sheet, accepting that MIRO products are subject to a different production process. As explained in Chapter 4, MIRO products are currently more costly than equivalent grades of conventional anodized material. However, they offer especially high reflectivity (typically 94 to 95 per cent compared with 84 to 87 per cent for most other reflective types), together with zero iridescence (colouring effect). As a result MIRO could be the preferred material for certain types of lighting for use in high-quality luminaires and with 16 mm tubes or more intense light sources. Indeed, Alanod told us that it expects sales of MIRO to grow and that, as a result, the sales of highly specular anodized aluminium would eventually fall to zero. Notwithstanding that, Alanod maintained throughout our inquiry that MIRO was a quite different product to anodized aluminium and should not therefore be regarded as being in the same economic market.

2.43. However, the MIRO range also includes both specular and non-specular finishes. Moreover, the price premium charged for MIRO over anodized aluminium appears to have fallen considerably since its product launch. It therefore appears to offer both a technical and economic alternative to anodized aluminium across a significant part of the range of material grades used for lighting. As a result, and notwithstanding the higher cost of MIRO products, it appears clear to us that they are direct economic substitutes for, and therefore compete with, many of the grades of conventional anodized aluminium (both specular and non-specular) used by the UK lighting sector.

2.44. Other materials which are possible substitutes for anodized aluminium products (including MIRO) include raw aluminium, aluminium or steel with a laminated reflective surface, coated plastic (with a reflective surface), and white painted material.

2.45. Raw aluminium appears to be used in greatest volume. Its cost (per unit weight for a given gauge) can be up to 50 per cent less than that of the lower grades of specular anodized material, yet it has many of the physical properties of the anodized product including reasonably high reflectivity. Alanod estimated that 750 to 800 tonnes a year of non-anodized aluminium was currently used in the UK for lighting. Both Alanod and Ano-Coil are well positioned to supply this material to the lighting sector and have indeed done so in the past, though anodizers in general have a strong commercial incentive to dissuade end-users from taking non-anodized material, because it undermines their mainstream business.

2.46. However, raw aluminium appears to be a poor technical substitute for anodized material, because it has a soft surface which is easily damaged during the louvre manufacturing process; it tarnishes easily and tends to dull further in service; it may easily become marked (for example, when light sources are periodically changed); and the surface cannot easily or satisfactorily be cleaned. It is not available in the same range of finishes (matt, ridged etc) as anodized material. Raw aluminium is nonetheless used for some lighting applications, and in order to gauge the extent we sought evidence directly from UK louvre and luminaire manufacturers (see paragraphs 4.43 to 4.46). It appears that some, but not all, of the luminaire manufacturers use it and, in particular for lower-priced luminaires, this use is increasing. Total use of raw aluminium in the UK appears on our data to have been around 500 to 550 tonnes in 1998. The greater part of the consumption to which these figures refer was by two end-users, namely Dextra and Key Lighting.

2.47. Dextra is a luminaire manufacturer which makes almost all of its own louvres. It used about [30] tonnes of raw aluminium in 1998, and may use about [30] tonnes in 1999; it buys only limited amounts of anodized material. Dextra sells mainly low- to medium-price luminaires, a large proportion of which are sold to electrical wholesalers, often using their own brand name and destined for refurbishment/short-term letting applications. Similarly, Key Lighting, also a luminaire manufacturer, uses mainly raw aluminium (around 100 tonnes a year), and sells similar products, mostly again to electrical wholesalers.

2.48. This evidence suggests that raw aluminium is a substitute for anodized material applications restricted to lower-priced luminaire products, often sold through electrical wholesalers. To that extent, raw aluminium does not offer competition to most of the wide range of anodized materials available, nor for use in medium- to high-priced luminaires. In addition, a significant price differential has existed in the past between the raw and anodized material, and there is no evidence of this narrowing. We therefore consider raw aluminium to be a partial rather than a close technical and economic substitute, although the value of UK sales of raw aluminium for lighting applications may well be rising. In 1998 it was around £1.5 million a year; in 1999 it may be nearer £2 million.

2.49. Laminated materials based on steel or aluminium as a substrate typically use a plastic film which is first coated with a suitably reflective material (silver or aluminium) and then laminated on to the substrate. The total reflectivity of this material can be as high as 95 per cent, with no iridescence. However, the resulting product is more expensive than specular anodized aluminium. Steel products are more difficult to handle safely, and the combination of quality and durability is less attractive to the UK lighting sector than for anodized aluminium products. We found no evidence that UK louvres/luminaire manufacturers currently use steel laminated products. In view of the above, we do not consider these laminated products to be close economic substitutes for anodized aluminium.

2.50. Plastic louvre-type products, are, we understand, popular in the US market (see Appendix 4.3), though US design and application differ markedly from the types of aluminium louvre used in the UK and the wider EC lighting markets. The US-style plastic 'louvre' is typically a single 'eggbox' moulding, metallized to give a highly reflective surface, and suspended below the light source. The aluminium louvres used in the UK and other EC markets are designed to wrap around the light source, and thereby give, other things being equal, both a higher degree of light control and a higher standard of lighting. We are not aware of any UK louvre maker which uses metallized plastic. In view of the above, we do not consider metallized plastic to be a close economic substitute for anodized aluminium.

2.51. Alanod also cited white coated materials as economic substitutes to anodized aluminium. Such materials undoubtedly offer high total reflectivity, but also high diffusion, with the effect that the degree of light control is lower. Whatever the substrate used or the material cost involved, these materials cannot offer the same lighting performance as specular anodized aluminium. We do not therefore consider white coated material to be a close economic substitute for anodized aluminium.

2.52. In summary, we do not consider laminated steel or aluminium materials, coated plastic or white painted materials to be close technical or economic substitutes for anodized aluminium material used by the UK lighting sector. In our view, they do not therefore provide an effective constraint on the pricing of anodized material. As explained above, we consider raw aluminium to be a partial rather than a close technical and economic substitute (see paragraph 2.48). Overall, therefore, we consider the relevant market in this inquiry to comprise anodized aluminium coil and MIRO products used by the UK lighting sector.

2.53. As regards geographic markets, around 60 per cent of the anodized aluminium sold in the UK was imported, mainly from other countries in the EC. Moreover, a significant proportion (75 to 80 per cent) of production in the UK (at Ano-Coil's two plants) was exported prior to the merger, much of it going initially to Ano-Coil's parent company in Germany

(Metalloxyd GmbH), and subsequently to other countries in the EC. Significant quantities of exports from the UK were also made direct to the Far East and other world markets.

2.54. These circumstances might be taken as indicating that the relevant market is far wider than the UK alone, and might, as Alanod suggested to us, imply a worldwide market. But against that, the UK market appears to exhibit some distinctive characteristics. The demand for this material in the UK, for example, is closely linked to the demand for particular types of lighting and particular louvre/luminaire designs.

2.55. More important, however, is that while the material may in some cases be produced overseas, most of the distribution functions (marketing, stockholding, slitting to size, physical delivery etc) are undertaken within the UK. This reflects the need for readily available, UK-based customer service and for just-in-time delivery to the UK-based louvre and luminaire manufacturers. Indeed Alanod told us that the UK market was very service oriented, and that suppliers must therefore be able to supply material in one, two or three days' time, which it was not readily able to do direct from Germany. As a consequence, all the suppliers of aluminium lighting sheet to the UK have established a presence here, in the form of either appointing exclusive distributors (such as Thyssen and Cashmores) or by using their own UK-based agents/subsidiaries (such as with Lorin and ACA).

2.56. Moreover, this structure of distribution means that there are no independent wholesalers in either the UK or any other EC countries selling products from more than one anodized aluminium supplier (in contrast to steel products, for example). There is also a marked lack of price transparency in this market such that suppliers may charge different prices to different end-users for the same or comparable products. It follows that there is limited scope for intra-brand price competition either within individual EC countries, or between the UK and other EC markets. As a result, we believe that it is possible for price differentials to arise as between the UK and other EC countries.

2.57. In view of the above, we consider the UK to be the relevant geographic market, albeit that imported supplies account for a significant proportion of the total.

Barriers to entry

2.58. Entry conditions are considered in detail in Chapter 4. Our assessment here is set out under two headings—technical, and commercial/economic barriers.

Technical

2.59. Anodizing (including continuous coil processing) is of itself a well-established technology in terms of the electrochemical processes involved, on which there are no protective patents which might otherwise act as technical barriers to new entrants. The production know-how required is more difficult to assess. As explained in Chapter 4, to build an anodizing plant, a new entrant without experience in the industry would require the necessary know-how for the design work. Both main parties (and other suppliers, we understand) designed their own production plants, albeit that the hardware and control systems were supplied by other specialist contractors. Although anodizing technology itself is long established, acquisition by a newcomer of the know-how necessary both to design a suitable plant and subsequently to operate it efficiently would necessitate incurring additional costs, though these are not readily quantifiable.

2.60. With regard to the MIRO process, Alanod claimed that vacuum deposition is also a relatively mature technology. Moreover, despite the process having been developed jointly by Alanod with the German plant manufacturer, Von Ardenne Anlagentechnik GmbH (Von

Ardenne), of Dresden, Alanod told us that any other aluminium anodizer, or any other interested manufacturer for that matter, would be free to order such a plant from Von Ardenne or another plant supplier, there being no general patent protection on the MIRO process. However, no other plant producers would seem to be capable of supplying such a plant without undertaking considerable development work, and Alanod and Von Ardenne have an agreement whereby, in order to recognize Alanod's contribution in know-how to the development of the MIRO production technology, a substantial one-off sum (of DM3 million) would be payable to Alanod if Von Ardenne installed a plant for any other company before 1 May 2001. The payment could be expected to increase the costs faced by an entrant wishing to purchase a plant from Von Ardenne.

Commercial/economic

2.61. A potential new entrant would also face a range of economic barriers. The first of these is the capital expenditure required for entry at a cost-efficient level of output. As far as we are able to ascertain, a new anodizing line comparable to that currently operated at Milton Keynes by Ano-Coil would cost at least £10 million. These costs would be largely irrecoverable if the venture failed, thus adding to its risk. Because of the capital-intensive nature of the production process, the new entrant would need to achieve a high level of output—probably close to 6,000 tonnes—in order to be cost-effective. This would be a formidable task given that, for example, the UK market is little more than 3,000 tonnes and the EC market is around 10,000 to 12,000 tonnes, and bearing in mind that the market has suffered from overcapacity in the recent past and is not experiencing any shortage at present. A new entrant would have to compete for existing business, with little prospect at present of creating new demand, and with the threat of encroachment by MIRO-type products at the upper end of the market, and by raw aluminium at the lower end.

2.62. The existence of MIRO itself constitutes a further economic barrier, in that a new entrant would be unlikely to be viable without the capacity to supply a full product range, including MIRO-type products. If a supply agreement could not be reached with Alanod, the new entrant would need to invest in vacuum deposition technology, thereby incurring considerably higher capital expenditure.

2.63. The newcomer would have to establish reliable distribution/marketing and customer support networks and might have difficulty in finding at an early stage personnel with sufficient experience in the field. There is also a dependency in this market upon consignment stocks and long periods of credit: working capital requirements would therefore be substantial.

2.64. Another possible barrier to a new entrant is the reluctance of end-users to switch from their established supplier without strong reason. Customers in this market require a high level of reliability, both in product quality and delivery time, and may be unwilling to switch to a supplier with no reputation in the market (but see paragraph 2.73). A potential entrant might also fear that, given the high level of post-merger market concentration in the UK, the incumbent supplier would react vigorously to any new entry in order to protect its sales and market share.

2.65. The considerations in the final sentence of paragraph 2.61 and in paragraphs 2.62 to 2.64 would also apply to existing anodizers who do not produce the specular product for the lighting industry.

Conclusion

2.66. We consider that the entry barriers to the market are primarily commercial/economic, and that these would effectively deter a newcomer to the production of the specular product for

the lighting industry from entering a market which has, in fact, seen no new entrant in the past ten years. We consider below the possibility of what might be called ‘quasi entry’—increased activity in the UK by anodizers already supplying the specular product to the lighting industry.

Competition

2.67. Before the merger, Alanod and Ano-Coil were by a wide margin the two largest suppliers to the UK market and there was vigorous competition between them. Alanod had some 35 per cent of all grades (40 per cent specular) and Ano-Coil some 40 per cent for all grades (47 per cent specular). Ano-Coil’s share included the highly significant Thorn contract.

2.68. The effect of the merger has been to increase Alanod’s UK market share to 75 per cent for all grades; 87 per cent specular. It has by far the largest share of sales to the main luminaire manufacturers in Europe, and, following the merger, has rationalized production, which should provide further production efficiencies and economies of scale. In addition it will have some advantages over its competitors as regards buyer power in relation to raw aluminium.

2.69. A key advantage to Alanod is that it is the sole producer of the high-quality MIRO product. (We do not regard SATMA’s high reflectivity HELIA product as a full competitor with MIRO over MIRO’s whole range of potential uses given that HELIA is, we understand, an expensive form of anodized aluminium, without the 95 per cent reflectivity of MIRO—see paragraph 4.17.) Alanod has recently invested heavily in a new production line for MIRO, and appears to have brought its capacity to something in the region of [\approx] the present demand. As set out in paragraph 76 of the consultants’ report (see Appendix 4.3), Alanod is attempting to extend the market for MIRO-type material with a new product, MIROL, to be produced on the same production lines as MIRO, which uses a cheaper, lower purity substrate. We need therefore to give some brief consideration to the possible future of this product. MIRO is currently expensive to make, being produced by vacuum deposition on a high-quality pre-anodized aluminium substrate. It is therefore most likely to be chosen only for the more demanding specifications. As lighting technology improves, however, and energy efficiency becomes a more significant determinant of lifetime costs, the potential application of MIRO products may well widen. The most modern thin-tube (T5) fluorescent lamps require high-quality reflecting components in order to make the most effective use of their more concentrated light sources. Moreover, the cost of using more expensive lamps and material may be offset by the ability to use smaller fittings, requiring a significantly lower quantity of reflective material.

2.70. Thus, developments in lighting technology may well enhance the commercial attractiveness of materials with the very highest optical properties. Any supplier solely in control of the MIRO product range, as well as being the dominant producer of its nearest alternatives, would be well placed to shape the development of the market in the way most beneficial to its own interests, in particular through the ability to link sales of the traditional product to sales of MIRO.

2.71. We also have to consider the significance for Alanod’s position of a possible increase in the use of raw aluminium. As noted in paragraph 2.45, this is substantially cheaper than the anodized product. Pressure on building costs can be severe, particularly at the end of large projects—when lighting equipment may be one area where economies may be sought. Moreover we were told that there may well now be more situations than hitherto involving shorter expected lifetimes for internal building configurations and displays. These factors diminish the significance of raw aluminium’s tendency to degrade in its surface finish over time, and we understand that some luminaire manufacturers are showing increased interest in raw aluminium for certain applications. However, while this may possibly affect demand for Alanod’s lower specular range products—generally those produced at Milton Keynes—we do not see it at present as a threat to the company’s overall position in the market.

2.72. One of the lighting manufacturers considered that there was a further constraint on competition. It argued that there were significant constraints on customers' substituting one producer's pre-anodized aluminium for another's, claiming that each producer of anodized aluminium had a distinctive product—even if it had a similar technical specification to a competitor's material. Thus a change of supplier could have an effect on the performance of the luminaires with a consequent need for testing and potentially for luminaire redesign. On the other hand, Alanod said that although consistency of product was important to customers, who generally sought to avoid using materials from different manufacturers in a single louver, all anodized aluminium coil was manufactured to certain tolerances, and even in a single coil there would be variations. It had received no complaints from customers over changes since the merger, despite the fact that certain products bearing the Ano-Coil code were now made only on Alanod's German lines, and that Ano-Coil products from Milton Keynes had also been changed slightly to bring them closer to their Alanod equivalents.

2.73. We looked carefully at these representations. While recognizing that the process of changing suppliers was not cost-free, we were not persuaded that to change a supplier necessarily involved anything more than normal commercial switching costs. Suppliers have been changed in respect of significant contracts in this field. We recognized that this might cause more difficulties for larger customers than smaller ones, but note that the largest, Thorn, decided to switch suppliers in 1996. Such measures can be phased in a way that causes minimum disruption. Moreover, in respect of the concern quoted to us about subtle differences between different manufacturers' outputs, we thought it reasonable of Alanod to argue that even with a single supplier customers will have to cope with some variations, sometimes within the same coil. We therefore concluded that any additional cost penalty for lighting manufacturers in switching to another supplier of anodized aluminium was of itself unlikely to be a significant hindrance to competition in this market.

2.74. On the other hand, pricing in this market is a matter of key importance. The manner in which prices are determined is likely to enable a dominant supplier to engage in price discrimination. This is the practice of setting different prices to different customers, irrespective of cost differences but depending on customers' demand elasticities and bargaining power, with the primary purpose of maximizing the supplier's sales revenue.

2.75. For the manufacturer to practise price discrimination, there must be control over the prices charged to end-users. As set out in paragraphs 2.32 to 2.38, manufacturers in this sector sell directly to end-users, or through exclusive distributors, or both. The absence of independent wholesalers in the sector allows manufacturers to exert considerable control over price (see Chapter 4). Even where a distributor has freedom to set prices to end-users, the importance of technical support to the end-users and the need in many cases for slitting services provides a degree of direct contact which might be used to influence prices and terms. We note that manufacturers in this sector do not issue price lists, with the result that there is little if any price transparency in the market, and hence no way for customers to detect price discrimination.

2.76. Several possibilities are open to a supplier wishing to inhibit customers from switching or dual sourcing. One of these is the use of retrospective rebate agreements, in which the customer obtains a greater discount the more he purchases over a set period. Such rebates can have the effect of locking out other suppliers. They do not appear to be widespread in this market, but are not unknown (see paragraph 4.73). A similar effect could be achieved by the use of tie-in sales, as referred to in paragraph 2.70. Alanod, being the only supplier of MIRO, has the opportunity to link sales of this product with sales of conventional anodized aluminium.

2.77. The strategies described above would be available to Alanod if faced by competition from a new entrant or an existing supplier seeking to expand its market share. In addition, freedom to practise price discrimination could enable it, if it chose, to resist competition by reducing prices only to those customers which appeared likeliest to consider switching suppliers.

2.78. The extent to which Alanod's market strengths could translate into detriment to its customers would depend on the degree of competition likely to be offered in the UK market. Although one of the US companies told us that it was looking to capture a significant share of the UK market in the short to medium term, this would have to be done in the face of an EC tariff, and higher transport costs than its EC competitors. The record of US companies' operations here so far does not suggest that they attach high priority to the market.

2.79. Our findings on technical and other barriers to entry have led us to the conclusion (see paragraph 2.66) that it is highly unlikely that either completely new entrants or even existing anodizers currently not producing the specular product will be tempted to enter the UK market.

2.80. This leaves us to assess the likelihood of another European company, already producing specular pre-anodized aluminium, being able to compete vigorously in the UK market with the dominant merged entity. Only one such possibility has appeared: a distribution agreement between Alanod's former distributor, Thyssen, and the Italian anodizer SACALL. We understand from Thyssen that this arrangement is intended to create a strong presence in the UK market, and opportunities for business here are being pursued. It will, however, take time to establish a position, even with Thyssen's recent contacts with prospective customers providing a useful starting point. Moreover SACALL has not hitherto been a supplier of any great significance in the UK market, [

Details omitted. See note on page iv.

]. Although Alanod told us that it thinks that Thyssen has a good chance of securing a considerable proportion of its previous customers, we believe that Thyssen will have a considerable task in persuading UK customers to switch from the products of Alanod. It is to be expected that in endeavouring to retain its customers Alanod will seek to take full advantage of its greater scale, and its well-regarded product range including MIRO.

2.81. Furthermore, Thyssen told us that its aluminium business comprised only about 10 per cent of its UK operations. Both the UK management and its German parent would inevitably need to consider for how long it was prepared to devote resources to this part of the business, if performance did not turn out to be as good as Thyssen expected.

Alanod's views of the merger

2.82. Alanod argued (see Chapter 6) that the merger would be beneficial in terms of saving Ano-Coil from insolvency within one to two years, so preserving production and jobs in the UK and giving customers the ability to obtain Alanod's wide product range through a high-quality distribution service. There would, it was argued further, be cost savings through the rationalization of production capacity, technical services and marketing, and competition in the market would ensure that these savings would be passed on to customers. It considered that Thyssen's familiarity with the UK market and established customer contacts would be valuable in providing that competition. Moreover, Alanod also argued that the availability to the lighting industry of possible substitutes, by way of other materials and vacuum-deposition products, provided alternative options.

The views of customers

2.83. Customers were divided in their response to the merger. Some expressed caution, but some others, including quite small companies, appeared to have no concerns. [

Details omitted. See note on page iv.

]

2.84. [

Other suppliers

2.85. From the suppliers' point of view only Lorin from the USA showed any degree of concern at the merger, although on balance it concluded that it did not oppose it. SACALL saw the large market share of the merged entity as a positive incentive for other suppliers to provide competition in the UK market.

2.86. The other suppliers, SATMA of France and ACA from the USA were invited to comment, but did not wish to do so.

Public interest

2.87. In assessing the likely effect of the merger in terms of the public interest we needed to take account of the information available to us about the position before and after the acquisition, and consider the difference between what would be most likely to happen if the merger were to stand, and what would have been most likely to happen had Ano-Coil remained separate.

2.88. Prior to the merger the UK market was provided for by two leading suppliers, between which there was genuine competition. Ano-Coil had the larger share of the relevant market at 40 per cent and Alanod, including sales through its distributor, Thyssen, had some 35 per cent. The remainder was supplied by Lorin and ACA, each with nearly 10 per cent; SACALL had some 5 per cent and SATMA had less than 1 per cent. These figures are set out in Table 4.1.

2.89. We recognize that, had the merger not occurred, there would have been some uncertainty about Ano-Coil's future. It seems likely that the Metalloxyd group would have found an alternative buyer for the business. We note that the business was clearly saleable—Alanod ultimately paid a substantial price for it, although it is doubtful whether anyone other than the remaining smaller suppliers to the UK market would have been interested. If one of these suppliers had acquired Ano-Coil they could have been expected to continue offering vigorous competition to Alanod. Even if no other purchaser had been found we believe that Ano-Coil would still have survived as a viable competitor, at least for a reasonable period.

2.90. Turning to the likely outcome if the merger were to be allowed to stand, Alanod would start in the position of having an overwhelming market share, and competition considerably weakened. We carefully considered Alanod's arguments that competition was not just a matter of current market shares alone in respect of anodized aluminium. Substitutes for anodized aluminium were, it claimed, available for the lighting industry, and barriers to entry were not significant. We consider, however (see paragraphs 2.44 to 2.52), that there is only limited scope for substitution of alternative materials, particularly in the short to medium term. We have noted that raw aluminium is being considered for applications requiring material at the lower end of the scale of optical properties; however, its substitutability for anodized aluminium will be constrained by the limitations on its performance. There is likely to be growth in its use at the lower-priced end of the luminaire market but we do not see that the current share of the market taken by raw aluminium-based products will grow markedly, at least in the foreseeable future.

2.91. Technical barriers to entry to the market are small, but this is of little account since the commercial barriers are formidable.

2.92. On the other hand, we believe that some of the merged entity's customers themselves would have significant bargaining strength. There would still be at least a degree of competition in the market from established anodizers seeking to increase their sales albeit from a low base. We were not persuaded by arguments from some lighting manufacturers that changing suppliers has disadvantages disproportionate to the benefits of obtaining a cheaper, similar product. The ability for customers—large or small—to threaten to change suppliers will, in our view, continue to have some constraining effect on the merged entity.

2.93. In these circumstances the key judgment we have to make is how successful would be efforts by smaller players in the UK market (and above all the proposed Thyssen/SACALL venture) to provide effective competition to the enlarged Alanod. For the reasons given in paragraph 2.78, we do not expect the US producers to show great vigour in seeking to build up their presence in the UK market in the foreseeable future. Although SATMA chose not to give us its views, we cannot see any firm prospect of its undertaking to do so, either. As for Thyssen/SACALL, it is difficult to forecast the customer support that they will be able to offer, or their products' acceptability to the broad spectrum of lighting manufacturers. But we believe that, in favourable circumstances, Thyssen/SACALL could well stand a chance of providing significant competition in the medium to longer term. But while this is a possibility, it is far from a certainty.

2.94. We do not expect that the new collaboration between Thyssen and SACALL will prove as effective in promoting competition as Ano-Coil would have provided had the merger not taken place. Moreover, Alanod's dual position as the dominant supplier of both anodized aluminium and the sole supplier of the MIRO range provides the opportunity for the tying in of MIRO products with conventional anodized aluminium. We therefore conclude that the merger has given Alanod the incentive and the means to exploit its market power by charging high prices, and possibilities for price discrimination would be enhanced. Having regard to all these matters, prices would, in our view, be more likely to be higher with the merger than if the merger had not taken place, notwithstanding the cost savings to Alanod due to the merger.

Wider benefits

2.95. Before reaching a final conclusion on the public interest, however, we need also to consider whether there would be any benefits resulting from the merger, primarily through the employment, production and exports associated with the retention of aluminium anodizing production at Milton Keynes. Alanod argued that its willingness to invest in the Milton Keynes plant, with the consequent safeguarding of at least 90 jobs, was a significant point in favour of the merger. On the other hand, we have already stated that we would have expected Ano-Coil to have survived in some form at least for a reasonable period (see paragraph 2.89). Nor were we convinced that Alanod would necessarily keep the Ano-Coil plant open in the longer term if, for example, growth in sales of MIRO-type products made it desirable to carry out a further rationalization of its conventional anodizing capacity. Accordingly, we do not expect the merger to retain operations that would otherwise have been closed, or to save jobs that we would otherwise expect to have been lost. We nevertheless recognize that there is some benefit to the UK in the plants' being part of the operations of a strong well-managed company that is prepared to invest in the UK, and we do accept that the jobs and production at Milton Keynes are probably somewhat more secure than they would have been had the merger not taken place.

Conclusion on the public interest

2.96. We do not on balance consider that the benefits outlined in paragraph 2.95 outweigh the detriment to the public interest from the higher prices that we expect to result from the merger. We therefore expect the merger to operate against the public interest with the specific adverse effect that prices would be higher than would otherwise be the case.

Remedies

2.97. In the light of our finding that the merger is against the public interest we have considered what remedies might be appropriate.

Structural remedies

2.98. The Act enables the Secretary of State to require divestment where the CC finds that a merger operates or may be expected to operate against the public interest. Divestment of Ano-Coil would mean that Alanod would be required to sell the shares or assets of Ano-Coil as it now exists, which amount to a manufacturing facility without, for the most part, marketing or sales operations, or technical or customer support. We invited Alanod to comment on divestment. Alanod argued that as a result of rationalization both prior to and following the merger, Ano-Coil no longer existed on a separate stand-alone basis and, therefore, might be of interest only to other coil anodizers, none of whom had expressed an interest.

2.99. Divestment might be considered the most obvious way of ensuring that Alanod's power in the UK market resulting from the merger did not work to the detriment of its customers. There is, at least in theory, no reason why, if the price were right, a purchaser should not be found for the current manufacturing facility at Milton Keynes, either to re-establish it afresh as an independent producer or, in the case of a company already within the sector, to integrate it into its own operations.

2.100. The Milton Keynes plant is relatively modern, with a good reputation, and a workforce capable of sustaining quality across a wide range of product to a level acceptable to a variety of customers, both at home and abroad. If acquired by a company committed to recapturing as much as possible of Ano-Coil's previous business it might provide effective competition to Alanod, so creating a closer approximation to the position before the merger, than would be the case if we were to rely on one or more of the currently small remaining participants to increase their market shares in competition with a dominant Alanod.

2.101. On the other hand, as has been made clear in the section of this chapter dealing with barriers to entry (paragraphs 2.58 to 2.66), the commercial barriers to anyone attempting to enter this market for the first time are formidable. Moreover, Alanod told us that by far the greater part of the Milton Keynes plant's current output of a limited range and type of product is exported to Alanod in Germany for sale to Alanod customers, either directly or through Alanod's distribution network. Alanod said that if it had to sell the Milton Keynes facility it would seek to supply these customers with material produced in Germany, [

Details omitted. See note on page iv.

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2.102. Running a plant such as Milton Keynes would require any buyer to find a market for a very considerable amount of material. This would be difficult enough if Ano-Coil were a going concern fully capable of independent operation. However, it is not. Rationalization already undertaken means that it is now essentially just a production facility. As pointed out in paragraph 2.98, it has for the most part no sales or marketing functions, nor its own capabilities for providing technical and customer support. Time and investment would be needed to re-establish these functions afresh. Furthermore, investment in an additional anodizing line might be necessary to widen the product range that could be produced efficiently.

2.103. We therefore see little or no prospect of a purchaser from outside the sector coming forward with the intention of re-establishing Ano-Coil as an independent force in this market. Nor do we believe that raw aluminium suppliers, or louvre/luminaire manufacturers, would be interested in downstream or upstream integration respectively. The market appears too small and specialized to interest the raw aluminium producers, and no lighting equipment manufacturer has a requirement for material large enough to justify its buying the production capacity available at Milton Keynes for its own use.

2.104. There remains the possibility of an existing anodizer seeking to buy the plant. However, any such purchaser would still face a need to find or capture substantial new business in the UK and the wider world market. While we cannot entirely rule out the possibility, we identified no evidence of serious interest from any company currently operating in the sector.

2.105. Moreover even if a buyer intending to maintain the Ano-Coil business for the medium to long term were to come forward, there is a risk that an enforced sale of the Milton Keynes plant might for a period cause a degree of confusion in the market which would itself damage such competition as remains. The process of divestment, even if the opportunity of acquiring Ano-Coil were taken up by an established anodizer, would take time. The uncertainty caused might in particular inhibit the efforts being made by Thyssen and SACALL to provide a serious competitive response to Alanod, during the crucial early months of their attempt to become established in the UK market. This could lead to an ultimate strengthening of Alanod's position.

2.106. Conversely, to the extent that Thyssen and SACALL were successful in increasing market share in the immediate future, the attractiveness of Ano-Coil to a prospective purchaser would be reduced and the chances of a successful divestment taking place would be diminished. If divestment did not result in a strong and viable business the benefits that the plant at Milton Keynes brings to the UK economy would be lost.

2.107. The Secretary of State's powers under the Act permit him to require structural changes which extend beyond divestment. In order, for example, to make it possible to sell a business, or part of a business, the Act gives the Secretary of State wide ancillary powers, including requiring companies to be formed or wound up, and to transfer assets from one part of a group to another.

2.108. We considered whether these powers would assist in this case. Since Alanod is incorporated outside the UK, controlled by foreign nationals, and has no business in the UK other than Ano-Coil alone, we concluded that this approach was not practicable in this particular case.

Behavioural remedies

2.109. Non-structural remedies would need to provide effective ways of ensuring that Alanod did not misuse its market power. While asserting that there was no adverse effect to be remedied, Alanod nonetheless put to us a number of proposals for behavioural undertakings which, it argued, would be adequate to meet any concerns.

2.110. One concern is that Alanod might use its position in the market to increase its prices. A maximum price control, or price cap, would therefore seem necessary as part of any package of behavioural remedies. The multiplicity of products, the scope for price changes by the redefinition of existing products, the many combinations of order sizes, pre-cutting and taping requirements, and the absence of price lists or price transparency, all serve to make practicable price controls difficult to design and apply. Nonetheless we raised with Alanod the possibility of establishing a price-cap arrangement which would aim to keep its maximum prices near to their level at the time of the merger.

2.111. In response, Alanod suggested to us that an arrangement might be introduced based on the prices current at the time of the merger, when supplying customers of Ano-Coil and those who bought from Alanod direct. Under its proposal, for the years 2000, 2001 and 2002, Alanod would undertake not to charge any customer a price higher than that paid by that customer on 17 March 1999, subject to Alanod being entitled to raise prices by any increases in the cost to it of raw aluminium, and by increases in the retail price index in 2001 and 2002.

Alanod would undertake to continue to supply any grades covered by the arrangement where requested by a customer.

2.112. We believe this suggestion could be the basis of a useful scheme, although we consider that a number of deficiencies would need to be rectified. First, we note that pricing information is not available for former Alanod customers buying through Thyssen, but we believe that with the cooperation of customers, who would stand to benefit from the arrangement, this difficulty should be capable of solution.

2.113. Second, we are not persuaded that increases in raw material prices should be allowable in full. The merger is bringing distinct benefits to Alanod, and we see no reason why it should not be required to absorb at least a significant part of any increase in raw material prices during the period of the price cap's operation.

2.114. Third, we see no justification for allowing increases in maximum prices in line with increases in the retail price index, on top of any adjustment for the price of raw aluminium.

2.115. Fourth, we consider that a period of five years, rather than the three proposed by Alanod, would be desirable to give other anodizers a reasonable opportunity to strengthen their positions in the UK market.

2.116. We are also concerned that, in order for a supplier to be a fully effective competitor, it could be important for that supplier to offer material of the highest reflectivity. But with one possible exception (the HELIA material of SATMA) such product is entirely in the hands of Alanod. Alanod argued that there is no significant patent protection on either the MIRO process itself or the equipment needed to produce it. However, its agreement with Von Ardenne, the sole manufacturer of such plant, referred to in paragraph 2.60 means that any company purchasing a MIRO plant in the near future would trigger a substantial payment to Alanod by Von Ardenne. This would have the effect of raising the price of the plant to the customer by about 10 per cent.

2.117. Although we doubt whether any other producer would wish on commercial grounds to invest in a MIRO plant in the next year or two, the agreement remains an additional hurdle. This barrier would be removed were Alanod and Von Ardenne to terminate their agreement. It would then be somewhat easier for others in the market to develop the capacity for producing material of the highest reflectivity and thereby become more effective competitors.

2.118. Our concerns about MIRO were reinforced by the fact that without safeguards it would in our view be open to Alanod to use its market power in respect of MIRO to influence the anodized aluminium market. This could be through anodized aluminium prices being made dependent upon a customer's MIRO requirements, or Alanod declining to supply MIRO at all in the absence of sales of anodized aluminium on its terms.

2.119. In response, Alanod offered to end its agreement with Von Ardenne regarding the payment due should another anodizer commission a MIRO plant from Von Ardenne. It also offered to undertake not to link MIRO sales with anodized aluminium, and to make MIRO available to its competitors for sale in the UK at prices based on those at which it had previously supplied end-users, subject to a discount of 5 per cent. While we are not convinced that this goes far enough, particularly given the prospect of further reduction in MIRO prices, the offer of undertakings to avoid linkage and to supply competitors with MIRO products at reasonable prices merits further consideration. Such prices should incorporate a commercially significant discount to those available to end-use customers at that time.

2.120. Finally, we were concerned that the use of retrospective rebates might inhibit customers from switching or dual sourcing, and Alanod's links to Jordan might raise issues of vertical integration. In response Alanod offered to give undertakings in respect of its willingness not to offer retrospective rebates to customers, and to reconfirm its assurance that it dealt with, and would continue to deal with, Jordan on an arm's length basis.

Recommendation

2.121. We consider that a package of behavioural remedies is the most appropriate means to alleviate the detriment to the public interest we have identified. Our concerns and Alanod's proposals in response are set out in paragraphs 2.110 to 2.120. We accordingly recommend that the Director General of Fair Trading should obtain a package of undertakings from Alanod and Ano-Coil covering:

- (a)* maximum prices;
- (b)* continuing supply of existing grades;
- (c)* not linking sales of MIRO to sales of anodized aluminium;
- (d)* supplying MIRO products to competitors;
- (e)* cancelling its agreement with Von Ardenne;
- (f)* not giving retrospective rebates; and
- (g)* maintaining arm's length business relationships with Jordan.