2 The United Kingdom market for hardened and tempered steel strip

Introduction

2.1. This chapter examines the market for hardened and tempered steel strip (H & T strip) in the United Kingdom. There is a brief description of the characteristics of H & T strip as a product and the uses to which it is put (paragraphs 2.3 to 2.5). The market is examined from the supply side, with details of the sale of H & T strip (paragraphs 2.6 to 2-18), hardening and tempering of untreated steel strip by customers (paragraphs 2.19 to 2.24) and the process by which some manufacturers use untreated steel strip to make products which are then hardened and tempered (paragraphs 2.25 to 2.29). Estimates of market shares are given (paragraphs 2.11 and 2.12). The market is analysed from the customers' side and more particularly by groups of customers according to their finished products (paragraphs 2.30 to 2.45). There is a discussion of barriers to entry to the market (paragraphs 2.46 to 2.48) and of the pricing policy of Firth Cleveland Steel Strip (Firth), an operating unit in one of Glynwed's subsidiaries, and J B & S Lees Limited (Lees) (paragraphs 2.49 to 2.52). Finally, there is an assessment of the state of competition in the market (paragraphs 2.53 to 2.70).

2.2. We collected information on the market for H & T strip and related markets from Glynwed and the other United Kingdom suppliers. We also conducted a survey of purchasers of H & T strip, including stockholders. We received questionnaires from 47 respondents, whose total purchases of H & T strip made up 64 per cent of the total estimated sales of H & T strip in the United Kingdom in 1988. A summary of the results of the survey is given in Appendix 2.1.

Hardened and tempered steel strip

2.3. Hardening and tempering entails cycles of heating cold-rolled steel strip to specified temperatures, quenching in liquid and tempering. The purpose of the process is to improve hardness and toughness. The different degrees of hardness and toughness are obtained by varying the number of cycles of heating and quenching and the temperature. Strip which is to be hardened and tempered must have a content of at least 0.25 per cent carbon. H & T strip made and purchased in the United Kingdom is not wider than 500 mm, and can be as narrow as 4 mm. Its thickness ranges from below 0.1 mm to 3.18 mm.

2.4. Most H & T strip is processed to manufacture products such as saws, hand tools, cutting blades, springs and valves. Some H & T strip is used for cutting, scoring or scraping tools in the paper-making and card product industries. The processing involved for these tools may be no more than to impart a cutting edge to the H & T strip. The various end-use sectors are discussed in detail in paragraphs 2.32 to 2.45.

2.5. Reflecting the variety of uses for H & T strip there is a wide range of combinations of width, thickness, hardness and toughness. There are also variations in carbon content and differing standards of polishing and dressing of edges, and nickel and other alloys may be added to the strip. There is much variation in customer requirements and a need for close liaison between purchasers and suppliers.

The market for H & T strip

2.6. The total demand for H & T strip in the United Kingdom is met in two ways. First there is the direct supply of H & T strip. Firth is the main supplier in the United Kingdom. Lees was an independent supplier until the merger and continues to supply H & T strip separately from Firth. A total of 6,161 tonnes of H & T strip was supplied to United Kingdom customers in 1988. Secondly, steel strip which has not been hardened and tempered (untreated strip) is purchased by some firms which then either harden and temper it themselves or employ subcontractors to do so. This is referred to as 'coil processing'. We estimate that about 2,300 tonnes of steel strip was coil processed in 1988.

2.7. There is, in addition, the hardening and tempering of products made by firms from untreated steel strip, either in-house or through specialist contractors. This is referred to as 'batch processing'. This activity does not create a demand for H & T strip but it gives an alternative to the purchase of H& T strip for some customers. Glynwed estimated that the volume of steel strip in products which were batch processed in 1988 was about 41,000 tonnes.

2.8. In summary, therefore, about 49,500 tonnes of steel strip underwent the H & T strip process in 1988. About 6,200 tonnes was supplied directly as H & T strip, about 2,300 coil processed by customers, and about 41,000 tonnes went into products which were batch processed. Purchasers of H & T strip, depending on the use to which they put it and on their size, may have open to them any of the above alternatives as sources of supply or means of manufacturing their finished products. We set out and discuss below more detailed estimates of the direct sale in the United Kingdom of H & T strip; the amounts of H & T strip which are coil processed in-house and by subcontract; and the amounts of steel strip content in batch processed material. In paragraphs 2.62 to 2.70 we discuss the degrees of substitutability between directly-purchased H & T strip and the alternatives identified.

Supply of H & T strip

Sales of H & T strip

2.9. Estimates for total United Kingdom sales of H & T strip and market shares by volume over the last five years are shown in Table 2.1.

TABLE 2.1 United Kingdom direct sales of H & T strip by volume, 1984 to 1988

	1984		*1985*		*1986*		*1987*		*1988*	
	Tonnes	*%share*	*Tonnes*	*%share*	*Tonnes*	*%share*	*Tonnes*	*%share*	*Tonnes*	*%share*
Firth	2,585	50.9	2,522	53.9	2,457	50.6	2,865	53.3	3597	58.4
Lees	590	11.6	504	10.8	634	13.1	567	10.6	661	10.7
Firth and Lees combined	3,175	625	3,026	64.7	3,091	63.7	3,432	63.9	4,258	69.1
Other UK suppliers	1,334	26.3	1,079	23.1	1,187	245	1,379	25.7	1,344	21.8
Imports	570	11.2	570	12.2	570	11.8	560	10.4	560	9.1
Total UK	5,079	100.0	4,675	100.0	4,948	100.0	5,371	100.0	6,161	100.0

Source: MMC using companies' data.

Glynwed estimated that total United Kingdom sales in 1988 were 5,088 tonnes. However, from figures provided to us by all United Kingdom suppliers we arrived at the figure for 1988 of 6,161 tonnes. Over the years 1984 to 1988 sales grew from 5,079 tonnes, an increase of 21 per

cent. Within this period, there was a fall in total sales from 1984 to 1985 and there were increases in each year thereafter. In the two years from 1986 to 1988 there was growth of 27 per cent. The estimated value of sales in 1988 was £7,236,000. Estimates of sales and market shares for different suppliers are shown in Table 2.2. A full set of figures by value for the five years was unobtainable.

TABLE 2.2 United Kingdom direct sales of H & T strip by vatue, 1988

	£'000	*%*
Firth	3.827	52.9
Lees	769	10.6
Firth and Lees combined	4,596	63.5
Other UK	1.641	22.7
Imports	999	13.8
Total	7,236	100.0

Source: MMC using companies'data.

2.10. It is generally considered within the industry that the level of demand follows the general level of activity in the economy as a whole. Technical change in markets for end-products can also affect H & T strip demand. Within the industry it is considered likely that United Kingdom demand for H &T strip will grow more slowly in the immediate future than in the last two years, perhaps even levelling out completely. Estimates given to us indicate that some slight increase in United Kingdom capacity is likely.

United Kingdom market shares

2.11. Firth's share of the direct supply of H & T strip in 1988 was 58.4 per cent by volume. Lees' share was 10.7 per cent by volume, giving a combined share of 69.1 per cent. The combined share in earlier years was somewhat lower, around 64 per cent. Shares for 1988 by value of sales show Firth and Lees with lower shares than by volume mainly because of the higher average value per tonne of imports. Firth's share was 52.9 per cent, Lees' share 10.6 per cent, the combined share 63.5 per cent.

2.12. There are currently three other United Kingdom suppliers of H & T strip. They are Ben Bennett Jr Ltd (Bennett), George F Homer (Redditch) Ltd (Homer) and Stocksbridge Precision Strip (Stocksbridge). The last supplier is a division of the British Steel Corporation and produces only thin strip below a thickness of 1 mm. It has a relatively small share of the market compared with other suppliers so that Bennett and Homer have most of the United Kingdom market not supplied by Firth or Lees. The total share of the supply of H & T strip of Bennett, Homer and Stocksbridge was 21.8 per cent by volume and 22.7 per cent by value in 1988. Several other firms supplied H & T strip in the early 1980s but withdrew from production. The share in the supply of H & T strip of other United Kingdom suppliers fluctuated between 26.3 and 23.1 per cent by volume in the four years up to 1987, before falling to 21.8 per cent in 1988.

Imports

2.13. Glynwed provided us with estimates of production by major non-United Kingdom suppliers of H & T strip outside the communist countries. These production figures totalled 133,500 tonnes. Glynwed estimated that these major suppliers account for about 90 per cent of H & T strip consumption in the non-communist countries. Our own estimate of total United Kingdom production obtained from questioning suppliers is 12,500 tonnes. Aggregation of these estimates by country gives the following totals:

	Tonnes
West Germany	66,000
Sweden	18,000
Japan	15,000
United Kingdom	12300
France	12,000
USA	10,000
Austria	6,500
Brazil	2,500
Spain	2,000
Italy	1500
Total	146,000

Glynwed told us that there is considerable overcapacity in H & T strip plant within continental Europe and that the plant is generally more modern than that of United Kingdom suppliers. Glynwed provided us with quotations showing costs of the transport of H & T strip between West Germany and the United Kingdom of about 3 per cent of total cost.

2.14. Glynwed estimated that 560 tonnes of H & T strip were imported to the United Kingdom in 1988. Imports came mainly from France, West Germany and Sweden. Some importers have agents or representatives here. One of Glynwed's major customers told us that representatives of French and Swedish companies visit him frequently. A large part of total United Kingdom imports (estimated by Glynwed at about 400 tonnes out of total imports of about 560 tonnes) is of thin strip below 0.25 mm in thickness which neither Fiith nor Lees currently supplies. More detail on imports is given in the analysis by end use at paragraphs 2.32 to 2.45.

2.15. In 1988 the share of imports in United Kingdom supplies was 9.1 per cent by volume and 13.8 per cent by value. The higher share of the market measured by value of sales reflects the large proportion of thinner higher-value H & T strip accounted for by imports. The share of imports measured by volume was 11.2 per cent in 1984 and fluctuated in the following years, with 12.2 per cent in 1985 being the highest share attained. The figures for imports are, however, estimates, whereas all the figures for United Kingdom suppliers are actual volume of sales reported by suppliers. The import share estimates should therefore be treated with caution. The opinion of several companies within the United Kingdom industry was that there were signs of a possible increase in imports in the near future, or at least the potential for them to increase if United Kingdom prices rose.

2.16. There are no controls or duties within the EC on the production or trade of H & T strip since H & T strip does not come under the control of the European Coal and Steel Community steel regime. Nor are there any controls or duties on imports from outside the EC, except that import licences are required for imports of H & T strip from the USSR and the German Democratic Republic. Such imports are counted against United Kingdom quota ceilings but there were no such imports into the United Kingdom in 1988.

Exports

2.17. Of estimated total United Kingdom production of H & T strip of 12,500 tonnes in 1988, 6,739 tonnes were exported. Firth had exports of 5,144 tonnes (59 per cent of its total H & T strip production). Lees of 1,303 tonnes (63 per cent of its total H & T strip production).

Stockholders

2.18. There are three principal stockholders known to engage in the supply of H & T strip: Ibbotson (Sheffield), Fearnehough (Sheffield) and Knight Strip Metals (London). All three source both from the United Kingdom and from overseas. They have slitting machines capable of cutting H & T strip stock into widths required by customers. There are also stockholders set up by overseas suppliers. Stockholding plays a significant part in the United Kingdom steel industry as a whole and stockholders not currently stocking H & T strip could do so if they

wished. We estimate that the total sales of H & T strip by the three United Kingdom stockholders were about £300,000 or 4.1 per cent of the United Kingdom market in 1988. H & T strip sold by stockholders is not shown separately in Table 2.1 but sales from suppliers to stockholders are included. Sales made through stockholders set up by overseas suppliers are included in our estimate of imports.

Coil processing

2.19. Glynwed estimated that the amount of steel strip which is hardened and tempered in-house was a minimum of 2,000 tonnes in 1988. We estimate that an additional amount of not more than 300 tonnes was hardened and tempered by a subcontractor.

In-house coil processing

2.20. Glynwed estimated that the cost of a small in-house plant for the hardening and tempering process would be in the range £80,000 to £150,000. Glynwed's estimate of the payback period on the minimum size plant costing £80,000 and processing about 100 tonnes per year is 3.4 years. The volumes of steel strip treated in-house by companies known to Glynwed range from about 100 to 400 tonnes per year. The companies known to do this are manufacturers of knives and blades, printers' rule (blades for cutting or scoring paper and card products) and steel measuring tapes.

Subcontracted coil processing

2.21. Besides manufacturing H & T strip, Homer offers the service of hardening and tempering of customers' H & T strip on plant used for its own production of H & T strip. Order quantities can be as low as 25 kilos.

2.22. There is a practical disadvantage for firms which buy untreated strip from one firm and have it treated by a subcontractor in that an extra stage of transport is necessary and two sets of invoices must be dealt with.

2.23. If the estimated volume of 2,300 tonnes of H & T strip processed through customers' own plant or through Homer is added to the sales of H & T strip then the total United Kingdom supply of H & T strip in 1988 becomes 8,461 tonnes. Firth and Lees together supplied 50 per cent of this volume.

2.24. The extent to which coil processing, either in-house or through subcontract, can be considered a substitute for the purchase of H & T strip is discussed in paragraphs 2.62 and 2.63.

Batch processing

2.25. In many cases it is technically and economically better to carry out the hardening and tempering process on finished products which have been made from untreated steel. Products which require considerable shaping, such as springs and some tools, are more easily manufactured from untreated strip which is easier to bend and work. In addition, hardening and tempering products after they have been shaped means that the inevitable wastage of strip in

the manufacturing process is of the lower-value untreated strip rather than the higher-value H & T strip. For some products which do not require severe forming or bending, such as certain types of saw and rule, the use of H & T strip is usually preferred to batch processing for technical and economic reasons.

2.26. Glynwed could positively identify about 23,200 tonnes of untreated strip that went into batch hardened products in the United Kingdom. About 18,500 tonnes of this was processed in-house, with the remaining 4,700 tonnes batch hardened by subcontractors. Glynwed's estimate of the total amount of untreated strip that went into batch hardened products in the United Kingdom was 41,000 tonnes.

In-house batch processing

2.27. The types of batch processing plant vary according to the products being processed. Glynwed gave us examples of two different types of plant. The first, for small components, would cost between £60,000 and £100,000 and would process in a year about 150 tonnes of steel strip products. The second type, used for treating larger steel shapes, is more complex, with an estimated cost of between £150,000 and £200,000, and would process 400 tonnes of steel strip products a year. Glynwed stated that the payback period for investment in plant, in the two examples quoted, would be between two and a half and three years. This was based on the differential between Glynwed's price for untreated steel strip and for H & T strip which is on average about £[*] per tonne or [*] pence per kilo.

2.28. Three of the respondents to our survey of H & T strip customers did in-house batch processing of products manufactured with untreated strip. The cost of their batch processing plant ranged between £80,000 and £500,000. The latter figure related to a high-volume plant processing complicated steel shapes.

Subcontracted batch processing

2.29. Glynwed provided us with a list of 18 firms which offer a batch processing service in the Midlands and Northern regions. Glynwed also told us that the prices of contract companies range between 25 and 70 pence per kilo for treated components. Three respondents to our survey of H & T strip customers employed subcontractors to batch process components for them. The average price paid was 38 pence per kilo. Glynwed estimated that about 1,600 tonnes of the total amount of batch processed products could have been manufactured from H & T strip instead (about 4 per cent of the total batch processed products). This bears on the question of the substitutability of batch hardening for H & T strip which is discussed in paragraphs 2.64 to 2.70.

Demand for H & T strip

The structure of demand for H & T strip by sue of customer

2.30. Glynwed provided us with a list of the 126 customers who bought H & T strip from Firth or Lees or both in 1988. Some customers do not buy from Firth or Lees. However, the distribution of the customers by value of purchases on Glynwed's list (see Table 2.3) should give a good indication of the shape of the distribution of all H & T strip customers. From our survey of these customers we know that many of the smaller ones do not buy from sources other than Firth or Lees, so that this gives us a minimum estimate of the numbers of small customers in the market for H & T strip.

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*Figures omitted. See note on page iv.

TABLE 2.3 Distribution of Firth/Lees customers by value of purchases of H & T strip from Firth/Lees in 1988

Value of purchases by firm	*Number of firms*	*% of firms*	*Total value of purchases £'000*	*% of total purchases*
Over £150,000	7	6	2,161	47
£50,000-£l50,000	17	13	1,699	37
£20,000-£50,000	12	10	367	8
£10,000-£20,000	10	8	140	3
£5,000-£10,000	16	13	115	2
£2,000-£5,000	32	25	101	2
Less than £2,000	32	25	32	1
Total	126	100	4,615	100

Source: MMC from Glynwed data.

*This figure differs slightly from that in Table 2.2 which incorporates adjustments for sales credits etc.

2.31. The top 24 customers (19 per cent of the total by number) accounted for 84 per cent of Firth and Lees sales of H & T strip in the United Kingdom. There were 80 customers (63 per cent of the total by number) purchasing H & T strip to a value of less than £10,000 in 1988, of whom 64 (51 per cent of the total by number) had purchases to a value of less than £5,000. The total purchases of these 64 customers were to a value of £133,000, only 3 per cent of total purchases from Firth and Lees.

Structure of demand by type of product

2.32. H & T strip is supplied in a variety of widths and thicknesses and it is possible to analyse the market into sectors according to these dimensions. Neither Lees nor Firth manufactures strip below 0.25 mm in thickness. Stocksbridge Precision Strip manufactures this product in the United Kingdom. Of an estimated 400 tonnes of such strip supplied to the United Kingdom in 1988 most was from overseas. Lees and Firth supply strip in the following dimensions:

Lees	Thickness	0.25 mm	-	3.18 mm
	Width	10 mm	-	266 mm
Firth	Thickness	0.25 mm	-	2.6 mm
	Width	19 mm	-	430 mm

2.33. Glynwed estimated that of the 3,597 tonnes of H & T strip supplied to the United Kingdom by Firth in 1988, approximately 1,200 tonnes was of a specification outside the production capability of Lees. Conversely there is some narrow strip below 19 mm supplied by Lees but not by Firth. We considered whether we should attempt to construct a complete sectoral analysis of the H & T strip market according to the dimensions of H & T strip supplied. Apart from the practical measurement difficulties involved it seemed to us that it would be more useful to analyse the market according to the end-products for which H & T strip was used. Such analysis cuts across the dimensions of width and thickness; within each category of end-product there is a need for different thicknesses or widths of H & T strip. The value of the analysis by end-product lies in the fact that for the manufacturer the availability of the main alternative to purchase of H & T strip, namely the use of untreated steel to manufacture products which are subsequently batch hardened, depends upon the nature of the products being manufactured.

2.34. Table 2.4 is an analysis of sales of H & T strip by end-product sector.

TABLE 2.4 Analysis of sales of H & T strip by end-product sector

Proctdut sector	*Estimated sales of H & T to sector 1988 £'000*	*Estimated % of total UK market*	*Firth share%*	*Combined Firth/Lees share%*	*import share %*	*Batch processing an alternative?*
Automoive products	1,200	17	85	85.3	0	Possible for clutch springs (90% of market) but not done in UK
Woodsaws-band	887	12	29	57	43	No
Springs and presswork	568	8	71	88	4	For some products
Printers' rule	655	9	70	71	1	No
Hand tools	355	5	65	99	0	For some products
Powerwoodsaws	349	5	78	100	0	No
Woodsaws-hand	338	5	89	99	0	Possible, but not done in UK
Doctor blade	320	4	96.5	96.5	0.5	No
Cutting knives and blades	264	4	88	95	5	For some products
Lawn-mower blades	145	2	100	100	0	Yes
Textile industries	61	1	44	44	0	Yes

Source: Glynwed and MMC survey.

It shows the relative importance of each end-product sector in terms of purchases in 1988, with the estimated market share of Firth alone, the combined shares of Firth and Lees, and the share of imports. It also shows whether batch processing is an alternative in each sector. The estimates were provided by Glynwed, based on its knowledge of end-product sectors, with some adjustments made by us in the light of information provided by our survey of customers. We know that there is some bias towards overestimating the shares of Firth and Lees, because Glynwed's estimate of the total United Kingdom market was too low (see paragraph 2.9). There is one sector not included in the table because neither Firth nor Lees provides any of the H & T strip that it uses. This is the sector which makes use of thin strip below 0.25 mm thickness to manufacture steel measuring tapes, feeler gauges, shock absorber valve plates and flapper valves. Glynwed estimated that the market in this sector was worth about £750,000 in 1988 (ie about 10 per cent of the total United Kingdom H & T strip market).

Automotive products

2.35. This is the largest sector in terms of H & T strip purchases. Over 90 per cent of its purchases were for clutch springs, which, as currently designed in the United Kingdom, cannot be batch processed. Two large customers accounted for purchases of about £900,000. Lees' sales to this sector in 1988 were very small so that they would add very little to Firth's 85 per cent share of the market.

Band woodsaws

2.36. Firth and Lees were the only two United Kingdom suppliers of significance in 1988. The merger would increase Glynwed's share of the market from 29 to 57 per cent. The rest of the market was met from imports. Batch processing is not a feasible alternative.

Springs and presswork

2.37. This sector includes shutter springs and mechanical concrete smoothing trowels. There are other United Kingdom suppliers and some imports. Some products are batch processed but not others. Firth's major share of the market (71 per cent) would become larger (88 per cent) if combined with Lees.

Printers' rule

2.38. These are blades used for cutting and scoring paper and card products to form special shapes such as boxes. Little processing of H & T strip is needed so batch processing would be inappropriate. However, of three major United Kingdom producers of the product, two have in-house coil processing plant and in total process about 400 tonnes a year. Firth dominated the market for direct supply of H & T strip with 95 per cent in 1988; Lees' share was only 1 per cent.

Hand took

2.39. This category includes putty knives, paint scrapers, bricklayers' trowels and measuring rules. Putty knives and paint scrapers can be batch processed. Firth supplied 65 per cent of the H & T strip for this sector in 1988 and Lees most of the remainder, with no imports. In the end-product market for hand tools the United Kingdom manufacturers have faced substantial and increasing import competition in the last few years. Imports grew as a proportion of the United Kingdom market from 50 per cent in 1984 to 57 per cent in 1988. Since H & T strip makes up a substantial part of the input costs in the manufacture of hand tools, this has put pressure on manufacturers to obtain competitive prices for H & T strip.

Power woodsaws

2.40. Batch processing is not feasible for this category of products. Firth had a high market share in 1988 (78 per cent) with Lees taking the rest of the market. The major purchaser of H & T strip in this sector sells its products to a leading United Kingdom brand name tool company. In the end-product market there is considerable competition from imports. The pressure on end-product prices translates into pressure from manufacturers for competitive prices for H & T strip.

Hand woodsaws

2.41. The situation is similar to that for power woodsaws. Glynwed did inform us, however, that manufacture from untreated strip and batch processing, although not done in the United Kingdom, was feasible. A USA manufacturer uses it as an alternative to the H & T strip route. As with hand tools in general, the end-product market for handsaws is competitive, which puts pressure on United Kingdom manufacturers to obtain competitive prices for H & T strip.

Doctor blade

2.42. This product is a long blade used for cleaning and scraping rotating rollers in the paper and printing industries. It is made by cutting H & T strip to appropriate lengths with minimal further processing. Untreated strip is not a suitable alternative. Lees does not currently sell in this sector.

Cutting knives and blades

2.43. These include tobacco- and cigarette-cutting knives and leather-splitting bandsaws. Batch processing is used as an alternative for most tobacco-shredding knives but H & T strip is necessary for leather-splitting bandsaws. Glynwed estimated that in this sector about 235 tonnes of untreated strip was coil processed in-house. Firth had 88 per cent of the market for

direct supply of H & T strip in 1988, Lees 7 per cent and imports 5 per cent. As for hand tools in general the end-product market for cutting tools and blades is competitive and faces substantial competition from imports. This increases pressure on United Kingdom manufacturers to obtain competitive prices for H & T strip.

Lawn-mower blades

2.44. Batch processing of about 120 tonnes was done in 1988. Firth had 100 per cent of the H & T strip market.

Textile industries

2.45. Firth had 44 per cent of the market in 1988. Lees had no sales in the sector. Batch processing of about 100 tonnes was carried out.

Barriers to entry

2.46. There are no institutional or regulatory barriers to firms entering the market for the supply of H & T strip. The most obvious candidates would be firms already engaged in steel strip production. For H & T strip coil processing by a customer, the minimum plant size was estimated by Glynwed to have a capital cost of £80,000 to produce 100 tonnes a year (see paragraph 2.20). To offer the service on a commercial basis would require a higher capacity than this, but if the H & T strip plant were added to an existing cold-rolling operation the firm could probably enter the market at a capacity of several hundred tonnes.

2.47. Bennett told us that the cost of entry into the market for H & T strip was small in relation to the high capital cost of steelworks plant in general. Homer said that entry was not difficult but required a long learning curve because of technical complexities.

2.48. Glynwed considered that new entrants were unlikely; the trend in the industry had been for firms to leave since the early 1980s. Factors which could explain the lack of potential entrants are that H & T strip is a mature and relatively small market for the steel industry, with an existing supplier having over 60 per cent market share. Imports are available and there is overcapacity among overseas suppliers. In addition larger customers can set up their own plants for coil processing.

Prices and pricing policy

2.49. The average prices of Firth and Lees for H & T strip supplied in the United Kingdom over the last three years are shown below.

£ per tonne

	1986	*1987*	*1988*
Firth	[	*	
Lees			]

*Figures omitted. See note on page iv.

Firth's average price has risen 8 per cent between 1986 and 1988, while Lees' average price rose 10.6 per cent in 1987 but then fell back in 1988 to below its 1986 level. The average prices conceal considerable price variations in H & T strip sold. Glynwed explained to us how prices varied according to width, thickness and finish, with a total of 378 different possible prices ranging from £[*] to £[*] per tonne. There are also various surcharges for alloy content and different dressing and length requirements. Finally there are quantity rebates.

2.50. Firth's average prices have been below Lees' in each of the three years. This is not true across all end-use sectors. In H & T strip supplied to manufacturers of power and hand woodsaws, hand tools and textiles, Lees' average prices in 1988 or 1989 (to date) have been below those of Firth. Even within each sector, however, there may be substantial differences in the dimensions and finish of H & T strip supplied so that the average prices may reflect these differences rather than the price competitiveness of the respective suppliers. The average selling prices of both Firth and Lees were higher in export markets than in the United Kingdom, suggesting that overseas prices are generally higher than in the United Kingdom.

Pricing policy

2.51. Firth and Lees have similar pricing policies, based on industry practice. Each major customer buys according to an individually negotiated price list. For new customers neither Firth nor Lees publishes price lists for general use. Both Firth and Lees have two basic price lists available internally, one for the United Kingdom market and one for export markets, and these are used as a guide by sales personnel in the initial quotation in response to new enquiries. Customer price lists are generally valid for 12 months. The only changes normally made during these periods are to reflect fluctuations in surcharges imposed by raw material suppliers.

2.52. Annual renegotiations take place with each customer individually. Glynwed told us that price rises are sought to reflect increases in cost. Following the usual annual raw material price increases, customers are notified of the general percentage increase sought and negotiations are conducted to arrive at an agreed price.

Competition in the supply of H &T strip

Customers' opinions

2.53. We asked H & T strip customers for their views on the state of competition in the H & T strip market. Twenty-one out of 44 respondents to our survey question thought that price competition was weak, 20 that it was fair and 3 that it was very competitive. Nineteen out of 43 respondents thought competition on quality was fair, 15 thought it weak and 9 very competitive. Generally, the larger customers had a more favourable view of the state of competition.

2.54. Price rises were the possible consequence of the merger mentioned most often (by 19 respondents) in reply to our survey question on the effects of the merger, although 15 respondents thought that there would be no effect. This latter group tended to be larger firms, many of which said that the prospect of imports would stop excessive price rises.

Competition among United Kingdom suppliers of H & T strip

2.55. In the overall H & T strip market (see Tables 2.1 and 2.2) the relative shares of the different suppliers have changed little over the last five years. Given the dominant share of one company, this might suggest a rather low degree of competition with the smaller firms tending to follow the prices set by the dominant firms. There was some evidence of firms,

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*Figures omitted. See note on page iv.

mainly larger purchasers of H & T strip, operating a policy of sourcing from more than one United Kingdom supplier or of switching from one to another. But many firms, especially smaller ones, took all their supplies from Firth.

Competitiveness of imports

2.56. Importers might not be expected to behave in the same way as United Kingdom suppliers. European firms are much larger than the United Kingdom suppliers other than Firth and already supply their domestic markets and export to other countries. They would thus not face the same fears that might affect small United Kingdom suppliers about the effect of seeking market share through pricing policy. However, the market share of imports over the five years up to 1988 has remained roughly the same at about 10 per cent.

2.57. Glynwed suggested to us that overseas prices are higher generally than in the United Kingdom market but supplied evidence to us of quotes from West German suppliers at prices approximately similar to Firth's United Kingdom prices.

2.58. Of the firmswhich replied to our survey question onimports of H & T strip, most said that imports were a satisfactory alternative to United Kingdom supplies with regard to quality, but not with regard to price. (Fifteen considered imports a satisfactory source on price, 20 did not.) Swedish H & T strip was considered to be of the best quality but according to several customers about 30per cent more expensive than H & T strip from the United Kingdom or other countries. One bandsaw manufacturer, however, reported that bandsaw H & T strip from France and Sweden had become cheaper than United Kingdom H & T strip over the past year. Firms which were already importing H & T strip had a more favourable view about the price of imports, but only a bare majority (6 out of 11) thought imports a satisfactory source with regard to price. Several larger firms said that if there were price rises for H & T strip from United Kingdom suppliers, they would switch to imports.

259. Glynwed argued to us that there had been greater import penetration in other types of steel strip in the last five years, and suggested that imports of H & T strip could be increased in the same way.

2.60. When analysed by sector, most imports (over half) have been in the thin strip sector (below 0.25 mm thickness). This sector is not currently supplied by Firth or Lees. One suggestion by customers in favour of the merger was that they would welcome a move by the combined Firth/Lees into this sector of the market to provide more competition to imports. In many of the other end-use sectors there are minimal or noimports at present.

2.61. Overall, there is no evidence that imports have provided active competition to United

significant price rise by United Kingdom suppliers would lead to an increase in imports. Imports would be most easily accessible to large customers but the stockholding sector could make them available to smaller customers.

Competition provided by coil processing

2.62. There were about 2,000 tonnes of steel strip coil processed in-house in 1988. As described in paragraph 2.20, the minimum economic throughput for an in-house coil processing plant is in the region of 100 tonnes a year. We estimate that there are about 20 firms which purchase this amount of H & T strip, so that at least 100 firmswould not have sufficient H & T strip requirements to make in-house coil processing economic.

2.63. There were under 300 tonnes of subcontract coil processing in 1988. This route would be open to most H & Tstrip customers, albeit with the inconveniences of an extra stage of transport and dealing with two suppliers rather than one. However, 300 tonnes is only about 5 per cent of the total United Kingdom market for H & T strip. In the customer survey the question was asked whether untreated strip was an acceptable alternative to H & Tstrip. Of the

47 respondents, none thought that it was. Among reasons given, 22 firms mentioned that the costs of coil processing were too high. The survey only covered purchasers of H & T strip and not firms which arrange their own coil processing. Moreover it does not tell us what would happen if H & T strip prices rose, when the coil processing route could become more attractive on price. The respondents' answers, therefore, do not rule out subcontract coil processing as having contributed some competitive pressure to the supply of H & T strip.

Competition provided by batch processing

2.64. The batch processing of products manufactured from untreated steel is an alternative to the purchase of H & T strip only for some products. Of the specialist sectors we have identified, batch processing was not found to be an alternative in the following:

(Most of) automotive products
Band woodsaws
Printers' rule
Power woodsaws
Hand woodsaws
Doctor blade

In some of these sectors batch processing was a technical possibility but its cost was such that firms would not consider it. In these sectors, therefore, batch processing does not appear to have provided any competitive pressure on the H & T strip market.

2.65. In the other sectors batch processing was undertaken for some products, although it was not possible to obtain estimates of the amounts of steel strip treated in this way.

2.66. Seven respondents to our survey said that they undertook batch processing. The smallest throughput of the in-house batch processors was 80 tonnes a year. As with coil processing this would rule out most H & T strip customers (we estimated that over 100 would not have this required throughput).

2.67. Subcontract batch processing is carried out by a number of firms. Three of our survey respondents gave us information about their use of batch processing firms. Prices quoted were such as to compare favourably with the price differential between untreated strip and H & T strip.

2.68. However, none of the 47 respondents to our question thought that methods using untreated strip were an alternative to purchasing H & T strip. Nine firms gave as a reason that the cost of batch processing was too high, and 32 said that their finished products were not suitable for batch processing.

2.69. The possibility of batch processing may have played its part in exerting pressure on the H & T strip market, as coil processing may have done. However, despite the large amounts of steel strip that are estimated to have gone into batch processed products, it is clear from the evidence that the route of batch processing was not a realistic alternative in many H & T strip end-use sectors. In the other sectors the lack of information on the amount of batch processing undertaken, and the negative responses on substitutability from respondents to our survey (some of whom already batch harden some products), also leave it unclear whether batch processing exerted any significant competitive pressure. Not one customer answering our survey said that a switch to a different method of manufacture was an alternative to buying H & T strip. The reorganisation involved in switching the method of manufacture would clearly be greater than in arranging their own coil processing, where the method of manufacture of end-products would not change.

2.70. The evidence points to coil processing as a more realistic alternative than batch processing. It seems likely that a significant relative rise in H & Tstrip prices would be needed for customers to contemplate a switch to batch processing. Since the batch processing route does not seem to have been an easy substitute for customers it cannot therefore have exerted much downward pressure on H & T strip prices.