

				£'000		
Year ended				Total	Home	Export
31st December						
1962	...	...	...	3,285	2,962	323
1963	...	...	...	3,355	3,013	342
1964	...	...	...	3,800	3,442	358
1965	...	...	...	4,418	3,969	449
1966	(first 26 weeks)	...	...	2,543	2,276	267

In addition BICC has a £750,000 contract for the supply of plant to the USSR for the manufacture of mineral insulated cable, and in 1966 sales under this contract amounted to £400,000.

Research and development

64. BICC's basic research is centralised in the laboratories of its Central Research and Engineering Division, where research in all fields of the group's activity is carried on. Total annual expenditure on research alone is about £1½m., of which the company estimates that about £36,000 is concerned with mineral insulated cable. In addition, the company states that annual expenditure on the development of mineral insulated cable within the Mineral Insulated Cables Division is about £65,000.

Overseas manufacture

65. BICC does not at present manufacture any mineral insulated cable overseas, but in 1964 it entered into an agreement with the Furukawa Electric Company of Japan, under which Furukawa became BICC's agent for the sale of mineral insulated cable and accessories in Japan, China, Korea and other South-East Asia countries. When sales reach the required economic figure, a joint manufacturing unit is to be set up in Japan to supply the area.

66. BICC told us that before the merger it had plans for establishing factories for mineral insulated cable in Australia and Canada.

CHAPTER 4

Sales, Prices, Discounts and Profits

Sales

67. An indication of the extent to which the United Kingdom market for mineral insulated cable has grown since 1956 is given in paragraph 20 and Appendix 2(a). The contributions to this growth made by Pyrotanax and BICC are illustrated in Appendix 2(b). In a period of 9½ years to 2nd July 1966 BICC increased its sales volume of standard cable more than ten times but it has to be borne in mind that 1956 was BICC's first full year of commercial production of mineral insulated cable. In much the same period Pyrotanax more than doubled its production in the United Kingdom. In paragraphs 37 and 63 we have given figures showing the value of total sales of mineral insulated cable by the two companies in recent years. In paragraphs 68 and 69 below we give analyses of sales by types of customer and product in the latest available accounting years.

68. Analyses of the companies' sales of mineral insulated cable by types of customer in the latest available accounting years are as follows:

	Pyrotanax		BICC ⁽¹⁾	
	Year ended		Year ended	
	31st March 1966		31st December 1965	
	£'000	%	£'000	%
Home trade				
Wholesalers	1,625	43	2,659	67
Industrial users	996	26	397	10
Contractors	799	21	595	15
Other cable makers	383 ⁽²⁾	10	119	3
Nationalised industries and Government Departments	— ⁽³⁾	—	199	5
	<hr/>	<hr/>	<hr/>	<hr/>
	3,803	100	3,969	100
	<hr/>	<hr/>	<hr/>	<hr/>
Export trade ⁽⁴⁾	709		449	
	<hr/>	<hr/>	<hr/>	<hr/>
	4,512		4,418	
	<hr/>	<hr/>	<hr/>	<hr/>

(1) BICC's figures include sales within the BICC group. These supplies were for initial installation and maintenance in BICC's own factories and amounted to less than £10,000.

(2) Of this figure £374,000 represents sales to Enfield-Standard Power Cables Ltd., a national distributor of Pyrotanax products.

(3) Direct sales by Pyrotanax to nationalised industries and Government Departments are included in other headings of the analysis. In the year ended March 1966 these amounted to approximately £330,000, excluding sales to the United Kingdom Atomic Energy Authority.

(4) Apart from sales of £97,000 to its overseas subsidiaries, Pyrotanax's exports are made either to its overseas agents or direct to users. BICC's figure includes overseas sales by other companies amounting to about £181,000 (see paragraph 62). In the year 1966 the corresponding figure was £233,000 out of a total of £603,000.

69. Analyses of sales by types of product were not available on a strictly comparable basis; BICC maintains analyses of both home and export sales but Pyrotanax does not distinguish between supplies for these two markets. The available data about products are given below.

	£'000			
	Pyrotanax		BICC	
	Year ended		Year ended	
	31st March 1966		31st December 1965	
	Total	Home	Export	Total
Wiring cable	3,018	2,900	337	3,237
Accessories	699	738	56	794
Wiring units	118	171	—	171
Heating cable	275	4	12	16
Thermo-couples	402	156	44	200
	<hr/>	<hr/>	<hr/>	<hr/>
	4,512	3,969	449	4,418
	<hr/>	<hr/>	<hr/>	<hr/>

BICC began selling mineral insulated heating cable in 1957 and thermo-couples in 1958; the company's sales of these products in 1965 were the highest it had achieved since selling started. In the first six months of 1966 BICC's sales of heating cable were £18,000 and of thermo-couples £127,000.

Selling prices—United Kingdom market

(a) Mineral insulated copper cable

70. Pyrotenax told us that its prices had originally been fixed mainly by reference to the prices of alternative systems, that is to say at the level at which it would be possible to compete in the market. It was of course necessary to have regard to the costs of manufacture and supply but the point above these costs at which prices were fixed was determined by the prices of alternative systems.

71. Having successfully entered the cables market Pyrotenax aimed to achieve a predetermined profit rate in relation to sales. In 1951, however, when its original patents were running out, and when copper prices reached unprecedented heights, Pyrotenax changed its pricing methods to provide for a predetermined amount of profit per finished coil of cable. In the period 1952-1954 Pyrotenax, expecting that the expiry of its patents would be quickly followed by the entry of other manufacturers into the mineral insulated cable market, reduced its prices. Pyrotenax has continued to use a predetermined profit per finished coil in fixing its selling prices but on several occasions the amount of the profit per coil has been reduced.

72. Pyrotenax told us that in the past two or three years the price of copper rose rapidly and that to keep mineral insulated cable competitive with other types of cable the company was forced to reduce the profit per finished coil. These reductions were reflected either in list prices (by not passing on the full amount of the increased cost of copper) or through increased discounts to the trade (see paragraph 81). BICC also said that it had not increased net selling prices to the full extent justified by the increase in the cost of copper. Both companies said that the increase in the prices of mineral insulated cable since 1961 had been proportionately less than the increase in prices of other cables. An indication of the movement of prices is given by the following indices, based on 1961, of the net prices of mineral insulated cable and of one competing cable which BICC considers to be representative. These were given to us by BICC.

		Mineral insulated cable	PVC insulated single core cable
1961 ...	...	100·0	100·0
1962 ...	...	102·0	99·6
1963 ...	...	103·5	92·7
1964 ...	...	103·5	104·9
1965 ...	...	106·0	116·2
1966 ...	...	116·0	151·1

73. BICC told us that it regarded Pyrotenax as the price leader and that it was natural that when entering the market BICC should adopt the Pyrotenax price list. However, when accurate costings were available it was possible to take a separate view, and on occasions list prices were higher or lower than those of Pyrotenax.

74. From our examination of the published price lists of both companies it appears that there has been little difference between the list prices of the two companies since the appearance of BICC as a major competitor; Pyrotenax appears nearly always to have been the price leader. On one occasion in 1966, however, BICC raised its list prices to a level about 10 per cent. on average above those of Pyrotenax. Pyrotenax did not follow suit immediately; but some six weeks later it increased its prices to a level slightly below those of BICC; and a week after this BICC made some reductions.

75. Examples of price changes of types of cable made by both companies during the five years ending May 1966 are given in Appendix 3. Pyrotenax maintains a United Kingdom selling price index which reflects the movements in list prices since December 1954. The index shows that prices in May 1961 were virtually the same as those in December 1954 but in the five years to May 1966 list prices increased on average by 42 per cent. (During this period, however, there was a marked increase in discounts as a result of which the average net price to customers showed a much smaller increase—see paragraph 81.)

(b) Accessories, installation tools and wiring units

76. Accessories and tools are regarded as aids to cable sales. Pyrotenax therefore fixes its prices at levels which yield a smaller gross profit in terms of sales than that obtained on cable. Both companies have said that special considerations apply in the case of wiring units. Pyrotenax originally regarded these as a service to support the sale of cables (rather than as products in their own right) in order to establish entry into a new and wider type of market. Thus, in the year ended 31st March 1966 Pyrotenax supplied wiring units at net prices which only just covered factory costs and which showed a loss if appropriate proportions of selling and administrative costs were taken into account. BICC said that its wiring units made 'little or no contribution to profit'.

(c) Resale prices

77. The prices at which wholesalers and other cable makers sell mineral insulated cable are not maintained.

Trade discounts and rebates—United Kingdom market

78. Both companies made, and continue to make, a broad distinction between the terms offered in respect of (a) standard wiring cable, heating cable, accessories and wiring units and (b) special cables. We deal with the arrangements for these two categories below.

(a) Standard wiring cable, heating cable, accessories and wiring units

79. Although Pyrotenax and BICC publish their list prices, and make available to customers details of their usual discount and rebate terms, both companies told us that price competition between them has been mainly in discounts rather than in list prices and that this had led to increasing use of special discount concessions to large buyers; details of these special terms are not published.

80. The complex discount and rebate schemes operated by both companies vary in important respects, but the general effect of the published selling terms on average prices charged to the three main classes of customer (wholesalers, industrial users and contractors) appears to be much the same. However, any comparison between the two companies' terms should take into account the incidence of the special unpublished terms given to large buyers. It has not been possible to make a detailed study but it appears to us that in the year 1965 BICC was on average rather more generous to industrial users and contractors than Pyrotenax was to these classes of customer in the year to 31st March 1966.

81. The increases in list prices since May 1961 have not been reflected in a correspondingly high percentage increase in manufacturers' sales realisations. There are three main reasons for this:

- (a) As both companies allow special terms to large buyers and as these special terms have been given to an increasing number of customers, the totals of these discounts have also tended to increase.
- (b) Increasing percentages of total sales have been taken up by whole- and other cable makers, whose discount rates are higher than those of industrial users and contractors.
- (c) Because discounts and rebates are based on sales values the increases in prices in recent years have meant that customers have received higher percentage rates of discount and rebate than they would have been entitled to had the rates been based on volume of purchases.

82. The basic factor determining the rate of discount off list prices allowed to most of the companies' wholesaler customers is the value of the customer's purchases in the immediately preceding accounting year, the rate of discount varying according to the value of the customer's purchases. On supplies to industrial users and contractors BICC usually allows rates of discount which vary according to the total value of each invoice; in addition, contractors receive a rebate of 5 per cent. at the end of each quarter on the net value of invoices. Each of BICC's manufacturing divisions is regarded as a separate unit for the purpose of calculating the discount rates appropriate to individual customers, that is to say, sales of mineral insulated cable are not aggregated with sales of other products for the purpose of determining the relevant discount rates. Pyrotenax operates a rebate scheme for industrial users and contractors; the rebates are calculated by reference to the value of the customer's purchases in the immediately preceding accounting year.

83. Both companies allow 2½ per cent. cash settlement discount provided payment is made in the month following despatch of the goods; BICC, however, does not allow this discount to Government Departments.

84. The discount and rebate structures of both companies are summarised and compared in the table below.

Type of customer	Published terms		Special terms	BICC average rates of discount and rebate, 1965
	Pyrotanax	BICC		
	Type of Range allowance	Type of Range allowance		
Wholesalers ...	Discount 17½-23	Discount 12½-24	Pyrotanax allows certain large buyers rates in excess of the appropriate published rates.	21
Industrial users ...	Rebate 2½-14½	Discount 2½-12½	Both companies negotiate special rates of discount for large buyers (BICC's highest rate, 18·5)	11
Contractors ...	Rebate 2½-15	Discount 2½-7½ Rebate 5 on net value of invoices	Both companies negotiate special rates of discount for large buyers (BICC's highest rate, 22½)	16·5
Other cable makers	None	None	Pyrotanax: 15, or more for large contracts. Exceptionally, 27½ to Enfield-Standard Power Cables Ltd., a national distributor of Pyrotanax products. BICC: 27½ maximum.	27
Government Departments	None	None	Pyrotanax: 12½ BICC: 15	
Central Electricity Generating Board and Area Electricity Boards	None	None	Both companies allow a discount rate of 17½	
United Kingdom Atomic Energy Authority	None	None	BICC: 17½ Pyrotanax: 15	
National Coal Board	None	None	BICC: 14	

(b) *Special cables*

85. Products which come into this category are thermo-couples, cables not having copper sheaths or conductors, associated accessories, and pre-assembled wiring units fabricated from special cables and accessories. BICC says that the channels of trade for special cables vary slightly from those for standard cables as 'it is necessary for the ultimate user to have close contact and advice from the manufacturer on the use of these products. Also these items are not normally stocked but are made to customers' specific requirements'.

86. Both companies operate the same sliding scale of discounts deductible on invoices and both have special flat rates for large buyers. The sliding scale ranges from 2½ per cent. on invoice values from £50 to £500 to 15 per cent. on invoice values of over £10,000. The values of purchases of special cables are not aggregated with standard cables for the purpose of calculating rebates and discounts based upon the previous year's purchases. BICC allows no settlement discount on special cables but Pyrotenax allows 2½ per cent. of the net amount invoiced for payment received during the calendar month following the date of invoice.

BICC's inter-divisional trading arrangements

87. The terms for inter-divisional trading within the BICC group are generally the same as those allowed to most-favoured non-group customers. However, the Mineral Insulated Cables Division departs slightly from this practice in that it allows 25 per cent. to other BICC divisions, although it allows 27½ per cent. to one large customer for what are regarded as special reasons. In January 1967 the Division agreed to allow British Insulated Callender's Construction Co. Ltd. a discount of 25 per cent. for mineral insulated cable.

Profits

88. We have described in chapter 2 how Pyrotenax has grown since its incorporation in 1936. As an indication of the growth in profits in the past twenty years we give below the group profits after tax for the five years 1945-46, 1950-51, 1955-56, 1960-61 and 1965-66.

Year ended 31st March				Group profits after tax £'000
1946	...	...	...	11
1951	...	...	...	93
1956	...	...	...	267
1961	...	...	...	429
1966	...	...	...	564

We obtained from Pyrotenax details of the group's profits for the five and a half years to 1st October 1966 ; the relevant figures are given in Appendix 4. In addition to the profits obtained from its manufacturing activities Pyrotenax derives income from other sources, such as manufacturing licences granted to manufacturers in Italy and the United States of America. Information about this income is given in Appendix 4 but as the income is small relative to the profits earned on manufacturing it has been ignored in paragraphs 90 and 91 where we have summarised the trading profits shown in Appendix 4.

89. BICC's Mineral Insulated Cables Division incurred a loss in its first full year (1956) of commercial production but since then has earned profits. We obtained from BICC details of the Division's sales and profits for the four and a half years to 2nd July 1966 ; the relevant figures are given in Appendix 4 and the profit rates have been summarised in paragraphs 90 and 91.

(a) Profits on sales

90. The trading* profits, expressed as percentages of sales, of Pyrotenax and BICC's Mineral Insulated Cables Division in recent accounting periods

* Trading profits are those obtained from the business of manufacturing and supplying mineral insulated cable.

were as follows :

Year ended 31st March	Pyrotenax group			Year ended 31st December	BICC %
	Pyrotenax Ltd. %	Overseas subsidiaries %	Group %		
1962	17	12	16	1961	N/A
1963	16	17	17	1962	9
1964	16	19	17	1963	9
1965	14	18	15	1964	9
1966	13	17	15	1965	12
6 months to 1st October 1966	12	20	15	26 weeks to 2nd July 1966	15

(b) *Profits on capital employed*

91. The trading profits expressed as percentages of capital employed (with fixed assets valued at historic cost less depreciation) were as follows :

Year ended 31st March	Pyrotenax group			Year ended 31st December	BICC %
	Pyrotenax Ltd. %	Overseas subsidiaries %	Group %		
1962	39	19	31	1961	N/A
1963	36	26	32	1962	15
1964	35	27	32	1963	15
1965	34	26	31	1964	16
1966	32	28	30	1965	23
				26 weeks to 2nd July 1966	30

92. Pyrotenax told us that the effects of the general economic recession in the summer of 1966 were first reflected in its figures for September 1966 when sales were lower than in September 1965. BICC said that there was a reduction in profit during July-December 1966 and that the capital employed performance given above for the first half of 1966 was not achieved for the year 1966.

93. The profit rates of Pyrotenax and those of BICC's Mineral Insulated Cables Division given in paragraphs 90 and 91 and for broadly the three years 1962, 1963 and 1964 show marked differences. The main reason for BICC's increased rates in 1965 was the costs savings resulting from the setting up of the tube mill within the Mineral Insulated Cables Division but this innovation did not bring the Division's rates to Pyrotenax's levels. There are other factors which we have taken into account in comparing the trading results of Pyrotenax and the Mineral Insulated Cables Division but these do not

disturb the general inference that in terms of profits on sales and capital employed Pyrotenax has been until recently more successful than BICC's Mineral Insulated Cables Division. Moreover, although both the Division and Pyrotenax show a profit rate of 15 per cent. of sales in the latest six months' period for which figures are available, Pyrotenax was incurring much higher costs than BICC for converting copper billets to tubes.

Productivity and efficiency

94. Both companies provided us with information about productivity and from examination of this we are satisfied that the rises in productivity (volume of production per man/year) in both companies were greater than in the most relevant sections of British industry as shown in published statistics. The rate of increase in productivity in BICC's Mineral Insulated Cables Division is more impressive than Pyrotenax's. It has however to be borne in mind that BICC did not begin manufacturing mineral insulated cable on a commercial basis until 1955, whereas Pyrotenax began some 20 years earlier, and BICC had perhaps more scope for increasing productivity (as defined above) in the past few years. Moreover Pyrotenax appears to have been more active in developing new products and new uses for basically the same products ; such activities may have depressed its productivity indices.

95. If such adjustments are made to Pyrotenax's costs as we think are necessary to ensure as far as possible comparability with BICC's experience in 1965 (in particular having adjusted Pyrotenax's materials costs as if the company had paid copper conversion costs of £57 a ton, the price which it is now paying BICC for conversion) it appears that in terms of factory costs per unit produced Pyrotenax has been more efficient than BICC. This may of course be explained partly or wholly by the fact that BICC has been manufacturing mineral insulated cable on a commercial basis for the relatively short period of ten years. This is supported by the costs and other data which BICC has provided in respect of the first six months of 1966 when BICC reported a sharp increase in productivity (as defined above) and in profit rates.

Finance for growth

96. The rapid growth of Pyrotenax since 1946 has been described in paragraph 67. Apart from a rights issue of shares in 1946 and a long-term loan of £100,000 (negotiated in 1953 and repaid in 1959) this growth was until 1966 financed from retained profits, with the result that the value of the net assets employed in the business was nearly doubled in the period of eight years to 31st March 1966. The expansion in business achieved by the company would not have been possible without a fairly high level of profits accompanied by the retention of a considerable part of those profits. But in 1966 Pyrotenax found that it had insufficient funds to finance the erection of a warehouse, the increasing cost of stocks and the extension of production facilities for aluminium cable ; in consequence £500,000 was raised by the issue of debenture stock.