

licensing under their United Kingdom patents (see paragraph 77) continue unchanged. Under the 1948 Lamp Agreement the approval of the General Meeting of the parties to that agreement is required before any party may license a non-party. This needs 90 per cent. of the votes, and Philips (Holland), with Stella, has about 18 per cent. of the voting rights (Appendix 9, Article 10 and Annex B, Part II). We are informed that the General Meeting has in fact passed a resolution approving the new policy.

## CHAPTER 6: QUOTAS

90. The various quota arrangements to which members of E.L.M.A. have been parties since 1925 are formally outside the scope of E.L.M.A. itself, but we have been told that a new member of E.L.M.A. would be expected to adhere to the agreement which governs the quotas. The principal agreements governing quotas have been international and are briefly described in Chapter 4. In addition there are some subsidiary agreements between certain British manufacturers relating to quotas in the United Kingdom market.

91. Under the terms of the Phoebus Agreement (see Appendix 8), which was in operation from 1925 to 1939, each party or group of parties\* was allotted a "Local Participating Percentage" in each territory in which it had sold lamps during a basic period preceding signature of the agreement. "Territories" consisted of 12 (later 13) Home Countries, where one or several parties were already predominant, and four Common Territories.† A party's Local Participating Percentage in any territory was the ratio between his sales and the sales of all the parties in that territory in the basic period, all parties' sales being measured in quantity in terms of a statistical "unit" lamp defined specially for the purpose. At the end of each "Fiscal Period" of 12 months the total sales of all the parties were calculated in units for each territory: each party's quota, in units, for each territory for that period was determined by applying his Local Participating Percentage to that total. Each party's quota was then compared with his actual sales, in units, to determine excesses and deficits. Penalties were paid by those in excess and compensation was received by those in deficit. The "unit" value of any given lamp was determined afresh for each Fiscal Period. A party could transfer quota in any territory to another party, but could not offset an excess in one territory against a deficit in another. Common selling prices in a Home Country were determined by a "Local Meeting" of the interested parties, their voting rights being proportionate to their Local Participating Percentages: there was a similar system in the Common Territories, except that there was a separate Local Meeting for each country (or in some cases for a group of countries) in each of these Territories.

92. The elaborate penalty provisions were on a scale rising with the size of the excess. They may be summarised as follows:—

(i) *Up to 7½ per cent. excess.* A party in excess paid a proportion of the "average realised price per unit" for each unit by which he was in excess.

\* Including the British Group—see paragraph 93.

† The 12 Home Countries were: Austria, Belgium, Brazil, China, France (including colonies), Germany, Great Britain, Holland, Hungary, Italy (including colonies), Japan and Spain. Manchuria and the rest of China later became separate Home Countries. The 4 Common Territories were the "British Overseas Empire A" (Australia and New Zealand), the "British Overseas Empire B" (roughly the British Commonwealth excluding the United Kingdom, Canada, Australia and New Zealand), "Common Territory Europe" (Europe, excluding the Home Countries), and "Common Territory Overseas" (the rest of the world, other than territories described above and excluding the United States and Canada).

This proportion was related to the level of the average realised price in the territory concerned and varied from 10 per cent. to 40 per cent. The proceeds were distributed among the parties in deficit.

(ii) *7½ per cent.—15 per cent. excess.* The penalties were stiffer here. They ranged from 30 per cent. to 50 per cent. of the “average realised price per unit” and the proceeds were distributed among the parties in deficit.

(iii) *15 per cent.—25 per cent. excess.* Penalties were paid to the parties in deficit on the same scale as in (ii) but in addition a party in excess had to pay into a common fund half the difference between this penalty and the full average realised price.

(iv) *Over 25 per cent. excess.* Penalties were paid to the parties in deficit on the same scale as in (ii) : in addition the whole of the difference between this penalty and the full average realised price had to be paid into the common fund.

We are informed that the penalty rate varied with the average realised price per unit in order that the penalty should bear some rough relationship to profit. The parties agreed in 1926 that the penalty rates ought to be prohibitive beyond a certain reasonable margin, and we are told that the first 15 per cent. was taken to represent that reasonable margin. In practice, excess beyond the first 7½ per cent. appears to have been rare: the penalties under (ii) have been described as not prohibitive though not leaving much profit to the company incurring them.

93. The British manufacturers who adhered to this system (all of them members of E.L.M.A.) did so in two different ways. The original signatories of the Phoebus Agreement—G.E.C., Cryselco, B.T.H., Ediswan, Metrovick and Siemens—known under the agreement as “the British Group”, had a single joint quota in the United Kingdom and were responsible under the agreement for controlling prices and terms there. This joint quota amounted originally to about 84 per cent. of the Phoebus parties’ total sales in the United Kingdom. Philips (Holland) with Stella had about 10 per cent. and the remaining quotas belonged to various foreign manufacturers. In practice, the British Group’s quota was increased to about 88 per cent. by transfers of quota : annual payments were still being made for these when the war broke out. The British Group had its own separate internal arrangements for sharing the joint quota among its members and for penalising and compensating those in excess and deficit respectively. When other British manufacturers became members of E.L.M.A. and parties to the Phoebus Agreement they were not admitted to the British Group but each was allotted a separate quota under that agreement. Thus A.C. Cossor Ltd. had a very small quota and by 1939 had ceased to make lamps but continued to receive compensation from the other parties in the United Kingdom. The British Philips Company was not a party and had no quota of its own, but as a subsidiary of Philips (Holland) enjoyed in practice nearly the whole of the quota belonging to that company. Stella, another subsidiary of Philips (Holland), had a separate small quota as a party to Phoebus. When Crompton became a party in 1937 it was allotted a separate quota of about 11 per cent. in the United Kingdom, based on the size of its sales when it had been in competition with the Phoebus parties, the other parties’ quotas being reduced accordingly.

94. The British Group had to make an internal settlement of its own for each Fiscal Period. It could make its own rules for this purpose, and the sharing out of the Group’s quota was the subject of a number of rather

complicated agreements. Siemens' quota was fixed at about 13 per cent. of the Group's entitlement, the remainder, after a dispute which lasted several years, being shared equally between G.E.C. and Cryselco on the one hand, and the three companies of the A.E.I. Group on the other, each receiving about 43½ per cent.; there was a further consequential settlement between G.E.C. and Cryselco by a formula under which the former's share of the British Group's quota was rather more than 38½ per cent. There were arrangements of a special nature with Siemens whereby part of that company's deficit was met by the sale of lamps to G.E.C. and B.T.H. Apart from this the penalty provisions for the internal settlement of the British Group were similar to those in the Phoebus Agreement itself, except that the two lower rates of penalty applied to excesses up to 20 per cent. (instead of 15 per cent.).

95. We have examined the Phoebus settlement papers for the United Kingdom market for the Fiscal Period of twelve months ended 30th June, 1938 and find that the British Group paid a collective penalty of about £55,000, having exceeded its sales quota by about 5 per cent. G.E.C. and the A.E.I. Group contributed the greater part of this penalty; among non-members of the British Group Crompton was the principal beneficiary,\* but Philips (Holland) also received compensation. In the internal settlement among members of the British Group G.E.C. paid out about £50,000 to the other members. We are informed that the British Group was normally in excess in the Phoebus settlements, and that G.E.C. was normally in excess in the subsequent internal settlements of the British Group. We have noted that the compensation received by Crompton in 1938 under the Phoebus settlement was sufficient to turn an estimated net loss of 6 per cent. on its sales of lamps into a profit of 8 per cent.

96. Elaborate machinery was set up to administer the quota system. The calculation of the size† of each party's trade in each territory in the basic period was the crucial initial task: it caused many disputes and we have noted that fees of more than one million Swiss francs were authorised for a firm of United Kingdom accountants for "controlling" the basic period figures during the first eighteen months of the agreement. Eventually S. A. Phoebus‡ itself took over this task as well as the annual calculation of each party's current sales, for which purpose copies of every invoice and credit note relating to sales of lamps (however small the transaction) were sent to Geneva. The scale for converting lamps into "units" had to be revised each year and for the purpose of conversion the parties' sales in each territory were analysed into some forty classes of lamps. All parties received copies of the full annual settlement showing the complete calculation for each party in each territory.§ Penalties and compensation were calculated in gold dollars after the departure of many national currencies from the gold standard in the 1930's. We have noted that Local Participating Percentages were expressed to five places of decimals of 1 per cent.

97. The Phoebus Agreement and the consequential agreements between the members of the British Group had the ostensible effect in the United

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\* The settlement, as far as Crompton only was concerned, covered a period of fifteen months, the company having become a party to the agreement on 1st April, 1937.

† Expressed in terms of "units".

‡ See paragraph 24.

§ The "preliminary" settlement papers for the twelve months ended 30th June, 1938, which we have examined consist of a circular letter of 43 pages with some 46 pages of annexes, as well as several supplementary letters and tables; many of the pages are elaborate tables (running to about 40 columns) showing the successive stages of the calculation of the settlement.

Kingdom of preserving the 1924 pattern of trade as between the parties, with the exception that Crompton's competition, which grew during the 1930's, was eventually stabilised by absorbing the company's sales into the system. Foreign interests in the lamp trade of the United Kingdom, except for the Japanese, were stabilised or even, by paying compensation or buying quota, slightly reduced. We cannot judge to what extent other influences, such as the introduction of the general tariff in 1932, contributed to these effects. We are informed that the lamp trade of the Phoebus parties was almost doubled between 1926 and 1939 and that the increase for the United Kingdom was greater than the average, but the extension of electrical generating capacity must have contributed largely to this result. We have noted that the trade of the British parties to the agreement, more than that of any other major parties, was confined to their home market.\* E.L.M.A. has told us that quotas originated under Phoebus as a method of preventing the uneconomic competition which was ruining the industry.

98. We have noticed that in a particular instance the quota arrangements influenced the attitude of the E.L.M.A. members in their negotiations with an important customer, namely, Joseph Lucas Ltd. That company made an agreement with E.L.M.A. and its members in 1939, under which it was to buy all its requirements of lamps in the United Kingdom from the members and to have a 5 per cent. price advantage over any other purchaser of motor lamps,† except members of E.L.M.A. themselves or Government Departments. The negotiations were reported to Geneva as they proceeded and the final agreement included provisions that Joseph Lucas Ltd. would not export lamps except those incorporated in car lighting sets and that E.L.M.A. would apportion the company's orders among its members. The former condition was inserted at the instance of the Phoebus parties, while the E.L.M.A. members explained at Geneva that the latter condition would enable them to apportion the orders according to their Local Participating Percentages. Joseph Lucas Ltd. disliked but accepted both conditions. The present relations between Joseph Lucas Ltd. and E.L.M.A. members are described in paragraph 180.

99. The Phoebus Agreement was originally expressed to terminate in 1934 but its duration was later extended to 1955. In fact, it was made ineffective by the outbreak of war in 1939. In 1941 the British parties with Philips (Holland) and the (American) Overseas Group signed the New General Agreement (see paragraph 61) which effectively maintained the quota provisions of the Phoebus Agreement as between the signatories in the territories in which they were then able to trade, although the penalties were modified by dropping the two severer scales described in paragraph 92. The Administrative Office was transferred to London, and the British parties naturally played a more important part in the running of the new organisation than they had in the Phoebus organisation. The agreement lasted until 1948 but the (American) Overseas Group withdrew in 1945.

100. The present quota arrangements are governed by the 1948 Lamp Agreement (see Appendix 9) to which only British manufacturers and Philips (Holland) are signatories. Separate quota arrangements apply to each of six territories, (i) the United Kingdom market, (ii) Australia, (iii) New Zealand, (iv) India, Pakistan and Burma, (v) South Africa and (vi) Ceylon and British

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\* According to the 1938 Settlement 87 per cent. of their sales were in the United Kingdom. At the other extreme less than 10 per cent. of the sales of Philips (Holland) were in Holland.

† Our use of the term is explained in paragraph 1.

colonial possessions.\* As with the Phoebus Agreement, the aim is to make "provision for securing to each of the individual parties its proper share of the increased business resulting from [the] co-operative effort". The arrangements are generally similar to those of the Phoebus Agreement, but the area covered and the number of parties are much smaller. The Local Participating Percentages (see paragraph 91) are based on those used under the Phoebus Agreement and excesses and deficits are calculated in a similar manner but the penalty provisions have been considerably modified in an important respect. A party in excess pays 30 per cent. of the "Net Profit per Unit" (see paragraph 102) to the parties in deficit in respect of any excess up to 7½ per cent. of his quota: and he pays 52½ per cent. of this Net Profit in respect of any further excess. This Net Profit is of necessity calculated according to a general formula and is therefore somewhat arbitrary, but it is near enough for it to be clear that some profit remains to a manufacturer however great his excess. (Under the Phoebus Agreement a manufacturer substantially in excess would have incurred very heavy losses on his excess sales.) A party cannot, moreover, receive compensation for any deficit in excess of 15 per cent. of his quota in the United Kingdom, and the actual penalties payable by the parties in excess are subject to reduction accordingly. It is intended that this provision shall eventually be applied to the other territories. In the first year of working the penalties were about one-third what they would have been under the Phoebus Agreement.

101. In the United Kingdom the British Group continues to hold a joint quota and makes its own internal settlement according to its pre-war agreements. The quota of Philips (Holland) is largely taken up by the British Philips Company. Stella and Crompton have their own quotas. The two remaining E.L.M.A. members, B.E.L.L. and Aurora, are not parties and their position is described in paragraph 103. The quotas for the United Kingdom market are, approximately, as follows:—

	<i>Per cent.</i>	<i>Per cent.</i>
British Group:		
G.E.C. ... ..	30	
Cryselco ... ..	3½	
A.E.I. Group ... ..	33½	
Siemens ... ..	10½	
	—	77½
Crompton ... ..		12½
Philips (Holland) (including the British Philips Company) ... ..		9
Stella ... ..		1
		—
		100

The actual payments and receipts due as the net result of all the arrangements in the United Kingdom for the twelve months ended 30th June, 1949, were as follows:—

	<i>To Pay</i>	<i>To Receive</i>
	£	£
G.E.C. ... ..	30,773	
Cryselco ... ..	24,745	
A.E.I. Group ... ..		13,714
Siemens ... ..		16,141
Crompton ... ..		17,667
Philips (Holland) (including the British Philips Company) and Stella ... ..		7,996

\* Each of these territories is meticulously defined; we note that sales of lamps in "Australian Antarctic Territory (South of 60° South and between 160° East and 45° East, except Adelie Land)" would count against the parties' quotas in "Australia"; quota percentages are still expressed to five places of decimals of 1 per cent.

The effect of these payments and receipts on the profits of the individual companies is discussed in paragraph 210; it is appreciable in the cases of Crompton and Cryselco.

102. The administration of these quota arrangements appears to be quite as elaborate as before the war, having regard to the reduced scope of the current agreement. The parties account to the Administrative Office for all their sales whether within the relevant territories or not, and they continue to submit a copy of each individual invoice of sales within these territories. In addition, the Administrative Office now has the task of calculating each year the "Weighted Average Manufacturing Cost per Unit" in order to arrive at the "Net Profit per Unit" which forms the basis for penalties. For this purpose each party submits an annual return showing the number of lamps of each of some 55 classes produced during the year and the total manufacturing cost of all those lamps calculated on a uniform basis in accordance with the detailed costing schedule in paragraph 7 of Annex C of the 1948 Lamp Agreement (Appendix 9). The Administrative Office assembles all this statistical matter, analysing about 8,000\* invoices a day by mechanical means.

103. The two members of E.L.M.A. (B.E.L.L. and Aurora) who have not been directly parties to the Phoebus Agreement and its successors have been subject to quotas laid down for them in agreements with the major members of E.L.M.A. made concurrently with patent licensing agreements. These agreements, so far as quotas are concerned, are expressed in terms similar to the Phoebus Agreement, and the two companies have been allotted basic quotas in the United Kingdom with provision for increase in proportion to the increase in the Phoebus parties' trade there. B.E.L.L. was not allowed to export until 1947, when export was permitted so long as it was at the expense of potential home sales, the total quota remaining unchanged: Aurora was allowed a small fixed annual export quota in the British Empire, excluding Canada. The penalty for excess of quota in the United Kingdom on the part of either of the companies by more than 25 per cent. was prohibitive. B.E.L.L. was not allowed compensation for deficits but Aurora could receive compensation for deficits not exceeding 25 per cent. of quota. Both of these agreements have formally expired, but we are informed that new agreements are being negotiated which will provide for larger quotas than before.

104. Under its licence agreement made in 1937, British Luma was similarly bound by a quota limitation. In this case, since the E.L.M.A. members do not wish to disclose changes in their turnover to a non-member, the rate of increase in sales permitted was fixed in advance by a scale which allowed sales to double in ten years from 1937 when British Luma started to produce. The penalty was prohibitive for any excess greater than 2 per cent. of the quota and no compensation was allowed for deficits. In fact British Luma has never traded to the extent of its quota, principally, so we are informed, because of the shortage of materials and other abnormal conditions during and after the war. British Luma was originally allowed to export only to the extent that the Swedish Kooperativa Förbund, which partly owns it (see paragraph 79), would allocate to the company part of its own quota as a licensee of Phoebus: since the Swedish Kooperativa Förbund is not associated with the agreements which have succeeded the Phoebus Agreement, British Luma has had no formal export rights since 1939 but in practice has

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\* This is equal to about 200,000 a month. We note for comparison that according to the report of the Commissioners of H.M. Customs and Excise for the year ended 31st March, 1950, the number of Customs documents handled for producing the Trade and Navigation Accounts for the United Kingdom is about 500,000 a month.

been allowed to export to most countries except Australia, North America and Japan. Since 1947 British Luma does not appear to have been formally bound by any quota provisions, although negotiations for renewal of the licence have been in progress. The E.L.M.A. members at first offered terms whose effect would have been to allow sales to increase by fixed annual increments to double the 1947 level in eight years with an extra allowance for fluorescent lamps: but a later offer made no mention of quota limitation. In the meantime British Luma has formally terminated the old agreement (see paragraph 80) and no question of quota arises in the current negotiations for a patent licence.

105. There is one aspect of the more recent development of the system of quotas to which attention should be drawn. The quotas fixed in 1924 were derived entirely from trading in filament lamps, but the development of discharge lamps has had to take place, so far as the E.L.M.A. members are concerned, within the limits of that quota pattern. Thus a manufacturer who has gained a bigger share of the market for fluorescent lamps must have either exceeded his total quota or taken an unduly small share of the market for filament lamps. To some extent fluorescent lamps have simply replaced filament lamps in use, but their introduction has, we are informed, expanded the total market for lamps substantially, and the system of quotas has given each member the right to a share in the expanded market whether or not he has contributed to its expansion.

## CHAPTER 7 : THE INDEPENDENT MANUFACTURERS

106. Independent Manufacturers in most cases make either general service filament lamps or motor lamps or specialize in a limited range of types, such as flashlamps, miniature medical lamps and telephone switchboard indicator lamps, for incorporation in instruments or apparatus. They do not produce any kinds of discharge lamps other than fluorescent lamps and neon tubes, and none of them produces a range of types of filament lamps comparable with that made by the two principal members of E.L.M.A. Many are small companies. The competition offered to the E.L.M.A. members has in the past been most marked in the field of general service filament lamps, but since the war has extended to fluorescent lamps and has increased in some other types of filament lamps. The output of the Independent Manufacturers has been given earlier, in paragraph 3.

107. Two Independent Manufacturers, Thorn and Ekco-Ensign, have expanded rapidly in the war and post-war periods until their lamp businesses are similar in size to those of medium-sized E.L.M.A. members: their output, particularly of general service filament lamps and of fluorescent lamps, is substantial and production is highly mechanised. These two companies are now closely associated, Thorn having acquired a controlling interest in Ekco-Ensign: each is also associated with interests extending beyond the lamp-making field. Thorn has installed modern and highly mechanised plant for making fluorescent lamps and claims to have the largest output of these lamps in the United Kingdom. At present the greater part of this output is exported and there appears to have been no attempt so far on the part of the company to undercut the retail prices charged by E.L.M.A. in the home market, though it claims in its recent advertisements to have doubled the life of its lamps, which sell at the same prices as before. Ekco-Ensign is a substantial manufacturer of filament lamps and markets fluorescent lamps on a smaller scale than Thorn.

108. British Luma, whose relations with members of E.L.M.A. have been described in paragraphs 79, 80 and 104, operates on a much smaller scale than