

Of course, one cannot blame the Ferranti board for closing FEL in 1984, because directors' central responsibilities are to their shareholders' interests. At the same time, one might claim that FEL's fortunes were indicative of a more ruthless attitude prevalent at senior management levels at Ferranti, especially after 1982. As we shall now go on to see in the next chapter, perhaps the attitude was insufficiently ruthless, given not only the willingness to support FEL as long as they did, but also the latitude given to management at the instrumentation division. Nevertheless, it is clear that in stark contrast to the pre-1975 era, when the de Ferranti family were motivated primarily by engineering considerations, from the late 1970s a much stronger commercial rationale was adopted as the central business philosophy at board and divisional levels. Again, there were good reasons why these changes were made, not least because of the decisive changes in ownership and the degree of external monitoring (whether by politicians or financiers). One should also stress the subtle and evolutionary nature of these changes, undermining any claim that 1975 marked a decisive watershed in organisational culture. Furthermore, in decisively streamlining FEL's operations the board was merely accepting the inevitable, given the subsidiary's failure to contribute to group performance, even if several hundred jobs had been secured for eight years longer than they would normally have been in a more conventional firm. While it is clear that in the macro-economic and business climate of the late 1970s and early 1980s FEL was doomed to disappear, it is worth remembering that a lot of highly committed people devoted substantial amounts of time to reversing the tide of Britain's industrial decline.

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Diversification in Moston: the Instrumentation Division

When reviewing the fortunes of what in 1975 was a sprawling division known as Instrumentation, it is firstly vital to remember from volume one of this history that not only did this operation encompass what had been for almost eighty years the most consistently profitable Ferranti business (meters), it had also been responsible for creating what by that time was the largest part of the group (Scotland). As long ago as the 1930s, Sir Vincent had instructed Eric Grundy's instrument department in Moston to act as the principal product development centre for the whole firm, resulting in key projects like avionics and mainframe computers starting life at that factory. It was also at Moston that the *Bloodhound* guided weapon electronics equipment was manufactured, as well as a myriad range of instruments, avionic systems and fuzes. Of course, there had been some commercial disasters, most notably domestic appliances, radio and television, all of which had to be sold off in the late 1950s to make way for *Bloodhound* production. One should also note that by 1960 all of the new businesses developed under Grundy's management had moved out of Moston and into more advanced facilities, leaving a rather outdated, shabby factory that was bereft of future growth points. Moston had also long stopped acting as the firm's principal product development centre, other divisions (Scotland, Wythenshawe and Bracknell, especially) having adopted a much more independent stance. As a consequence, the Moston engineering team lost some of its sparkle, when compared to its counterparts elsewhere in the group, posing questions about the division's ability to innovate. Furthermore, as a centre for the production of precision mechanical devices, Moston was no longer in the mainstream of digital electronics that lay at the heart of success stories in other parts of the group.¹ Consequently, even though the division had been central to the development of Ferranti up to the 1960s, senior management at Moston was left with the enormous challenge of occupying a major production facility with profitable business. At the same time, as we noted in volume one,² the once-profitable meter department located in the equally outdated plant in Hollinwood was beginning to experience severe commercial difficulties, accentuating the problems facing Instrumentation throughout the 1970s.

This chapter will analyse the fortunes of Instrumentation division over

what was a period replete with substantial challenges and opportunities. Sustaining some of the themes developed in the last Chapter, it will become clear that under Derek Alun-Jones managers were encouraged to acquire complementary businesses as a means of boosting performance, rather than rely purely on the traditional Ferranti strategy of organically developing new activities. Similarly, one can see how the highly devolved nature of Ferranti worked in practice, because successive divisional managers (Lester George and Albert Dodd) were given considerable latitude in devising their strategies, especially when it came to new product development. This further supports a key point made in Chapter 1, namely, that after 1975 Ferranti operated in much the same way as it did under family management, albeit with the caveat that merger and acquisition strategies played a stronger role. Returning to an issue discussed in the previous Chapter, though, given the relatively poor commercial performance of what after 1978 was known as Ferranti Instrumentation Ltd, it is a moot point whether the board should have closed Moston and its associated activities and concentrated the firm's financial and engineering resources on the more prosperous avionics and computing operations. Alternatively, perhaps all of the Moston departments



Moston had been the production base for the highly successful *Bloodhound* range of guided missiles.

ought to have imitated the Hollinwood meter venture, which metamorphosed during the late 1970s into a joint venture with the German electrical giant, Siemens, thereby injecting fresh resources at a time when the business looked doomed. On the other hand, bold moves like establishing a telecommunications venture with a leading American corporation brought renewed hope that Moston would survive and flourish, illustrating how the managers refused to shy away from the enormous challenges facing a factory that many felt had outlived its usefulness.

4.1 Meters, mergers and sell-offs

It was one of the proud Ferranti boasts of the 1970s that ever since the young Sebastian de Ferranti had devised an ingenious mercury-motor meter in 1885, the firm he founded had been one of Europe's leading producers of electricity consumption measurement devices. Based at the Crown Works in Hollinwood, as a result of a combination of radical design improvements and the use of highly efficient mass-production techniques, meter department had succeeded in generating a consistent flow of profits that up to the 1950s was used to subsidise many of the new activities in areas like avionics and electronics.³ It is also important to remember that up to the early 1960s profitability was reasonably well assured, because along with its principal British competitors (GEC, Sangamo, and Landis & Gyr) Ferranti had negotiated a price-fixing agreement. Furthermore, British meter manufacturers were protected from extensive foreign competition by the CEB's insistence on much higher technical specifications than those prevailing in Europe and the USA. The department's heyday was the period 1946–60, when on the basis of rapidly expanding sales of the highly successful FM single-phase meter it contributed almost £2.75 million to central coffers.

Even though by the 1960s Ferranti was diversifying extensively into the high-growth electronics and avionics markets, meter department remained at the heart of the business. After all, the chairman and senior executives still had their offices at Crown Works, indicating to all inside and outside of the company that this was the traditional centre. As far as meter department was concerned, however, this decade proved to be a watershed, in that thereafter not only did market prospects start to deteriorate, but also certain criticisms of the Ferranti design were heard for the first time. The market problems were closely related to those described in the last Chapter, with the CEB's over-optimistic electricity sales projections proving so woefully short of the mark that equipment ordering had tapered off severely.⁴ This persuaded the Area Boards, which in the UK were responsible for electricity distribution and measurement, to cut back on meter purchases, while extensive meter

refurbishment programmes were also introduced, extending the life of a standard device. In addition, in 1961 the meter price ring was disbanded by the Restrictive Practices Court, leading to much more intense competition in what was a stagnant market.

These new external challenges were clearly of considerable concern to those running meter department in the 1960s, not least because by the end of the decade Sebastian de Ferranti was informed that from a position of substantial financial strength the department was predicting a negative cash-flow. The depth of this deterioration can be gauged by noting that in the 1970s meter department was still using production machinery that had been totally depreciated in the accounts, substantially reducing the overhead element in the costs. But of even greater concern to a department that prided itself on a design that had stood the test of time were the critical comments emanating from the Area Boards about the performance at low loads of the FM meter.⁵ As the Electricity Council had just introduced the 20/80 standard for meters, this placed considerable emphasis on a device's ability to measure low loads. When the Area Boards conducted a national survey on the impact of this 20/80 standard, it was discovered that over time the pivot and jewel suspension mechanism in Ferranti meters wore away so badly that performance at low loads was poor.

Surprisingly, though, the senior meter department staff proved reluctant to respond to these criticisms, even though (as Figure 4.1 reveals) sales were falling. The chief meter engineer, Maurice Whitehead, refused to believe that the competitors' use of magnetic bearings and cyclometer dials was superior to the pivot and jewel mechanism employed by Ferranti. In making this decision, he was supported by Jack Prince, meter department manager since the early 1940s, who refused to sponsor new meter designs that would require significant expenditure on new tooling. The meter department production machinery had been so heavily depreciated that Price had been able to generate substantial returns, even if substantial stocks of obsolete parts were accumulated at values that most regarded as ridiculously inflated. Fortunately for Ferranti, though, Prince retired in 1968, leading to the appointment of Jim Carter and the introduction of new designs that accommodated customers' concerns about low-load reliability. Maurice Whitehead was also asked to give way to a new chief meter engineer, Russ Bradley, leading to a radical reappraisal of design specifications. Over the course of the early 1970s, further development work was conducted by Bradley's engineering team, culminating in the introduction in 1975 of what was widely regarded as a highly advanced single-phase meter, the F2Q.

While the F2Q successfully perpetuated the eighty-year-old Ferranti reputation in meter design, it appeared at a time when the firm as a whole was facing a general liquidity crisis. In these circumstances, Sebastian de Ferranti

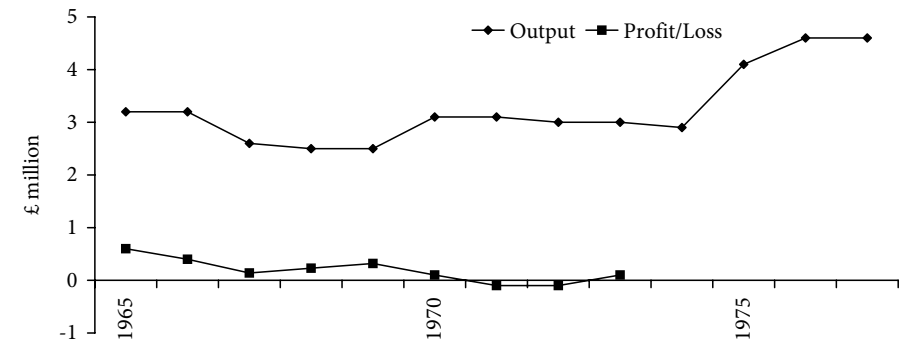


Figure 4.1 Meter department output and profitability, 1965-77

was obliged to weigh up a series of difficult choices. In particular, he was obliged to note that while meter department had been responsible for subsidising many new ventures in the past, by the 1970s its market prospects looked weak at best. One should also add that as a result of Britain's entry into the Common Market (now the European Community) in 1973, it was predicted that the Electricity Council's demanding technical specifications would be significantly altered, allowing German and French meter manufacturers to encroach on a market that had once been an exclusive British preserve. Faced with intensifying competition from European giants like Siemens, many of which produced in much greater volume than the British firms, it seemed unlikely that the cash-strapped Ferranti activity could survive in this market. Jim Carter also toured several meter manufacturers in Japan, discovering a level of automation that was the envy of the engineering world. To catch up to this standard would require enormous investment in both facilities and equipment, again demonstrating to meter department that insuperable obstacles lay in their way.

Of course, Carter and his team lobbied hard for a fresh injection of capital, in order to revamp the outdated production facilities in Crown Works and face the competitive threats. Sebastian de Ferranti, on the other hand, was unable to respond positively, given the other problems he was facing in transformers, microelectronics and with the bank. As Figure 4.1 reveals, during the early 1970s meter sales were stagnant. Given the rampant inflation of that period, however, it is clear that in real terms the business was deteriorating badly, with losses appearing in the departmental balance sheet for the first time.

It is clear that on inheriting the Prince-Whitehead legacy, Jim Carter was faced with a 'no-win' scenario: even if his engineering team had proved capable of introducing new ideas that overcame all of the 1960s design criticisms, the firm could not afford to invest in a department with such