

intense programme was set in motion to provide jigs, tools, fixtures and gauges for the widest number of operations on the component parts of the product machines.

During 1946 TMM re-examined the plans, it had lain before the war, to concentrate research on the textile processes in one closely integrated location as the means to ensure the best possible future lines of product machinery were developed. The outcome was the formation of a separate subsidiary research company which was given the name Textile Machinery Makers (Research) Limited (TMM(R)). A home for the company was found in a former weaving mill at Helmsshore, in the Rosendale Valley, which, as a munitions factory during the war, had been labelled Wavell Works. Teams of specialists versed in the disciplines needed to design, build and experiment on the various types of textile machinery were transferred from the Operating Companies. These teams were soon augmented with professional textile technologists and engineers, many recruited directly on graduation, and highly experienced technicians, drawn from within the textile industry itself, to establish one of, if not the, finest complement of some 150 textile and textile machinery experts in the world. These experts had at their disposal the latest types of TMM's product machines, and a well equipped textile testing laboratory, which were used not only for pure experimental work but also to process samples of the customers' stock in order to advise the customers how best they could utilise their machinery, already installed in their mills, or to determine for Platt Brothers (Sales) the best possible specifications and combinations of machines to be offered against customers' enquiries: for new machinery. They had, also, the support of a Technical Information Library, containing all the standard works and the latest literature on textile processing and engineering practices and a Patents Department which held, for consultation, copies of all the British and foreign patents bearing on textile processing and engineering. The department also prepared and prosecuted patent applications for inventions made by the experts. Both these departments were staffed with specialists in their own fields. As well, the experts were provided with the findings of the Technical Economy Department which evaluated the technical/economic relationship of new types of processes and machines, both of TMM's own conception and of those introduced on the market by competitor companies. The services of TMM(R) were also available to Tweedales & Smalley and Prince Smith & Stells.

Prince Smith & Stells Limited (PS&S) was a company, at Keighley, formed from an amalgamation of two long established companies (Prince-Smith had been founded as early as 1796) which was engaged in the manufacture of worsted preparatory, spinning and doubling

machinery for both the English and French systems. The company was not part of the TMM Merger group of companies but subject to a controlling interest held directly by Platt Brothers & Company (Holdings) Limited. After the interest was acquired, manufacture of worsted machinery ceased at Platt Brothers, except for carding machinery of which PS&S was not a maker, and the Taylor Wordsworth interest was made over to PS&S.

In 1943 intelligence had been received at Oldham that in India there was a growing intention to manufacture cotton textile machinery in that country. Whilst it was felt that such a move could not seriously materialise until the second world war had ended, there were, nevertheless, sufficient pointers to believe one of TMM's vital markets was in potential jeopardy. Consequently, in the December of that year, a senior director of TMM visited India to assess the position at first hand. He discovered that the basis for the intelligence was well founded and following discussions with various parties in India, each with different ideas on how textile machinery manufacture should proceed, he formulated a scheme whereby TMM and Tweedales & Smalley (for the latter company was equally affected) would best protect their interests. The scheme was for TMM and T&S to join with the Indian mill owners in establishing a company to manufacture cotton spinning machinery at Bombay. In 1946 a delegation from the interested Indian parties visited the UK and the scheme was converted into a company, registered in India, which was named National Machinery Manufacturers Limited (NMM). Under the Agreement governing the relationship of TMM and Tweedales & Smalley (jointly termed the English Companies) with the Indian company, twenty-six per cent of the capital was to be owned by the English Companies, the remainder to be owned by the participating Indian mill companies. The English Companies were to have members on the Board of Directors of NMM one of which, during the formative period of the company, was to be the Managing Director (The Indian practice of Managing Agents was not to apply). Responsibility was to lie with the English Companies to provide much of the equipment and the key staff necessary to set-up the manufacturing plant, and, thereafter, expert staff to manage the manufacturing processes until Indian personnel was adequately trained to take over. The Indian company had the right to use the English Companies' designs, trade-marks and know-how provided the machinery it made displayed this fact. Machinery made under these terms was only to be installed in India.

A substantial factory was built, together with a residential compound for the English Companies' expert staff and their families, at Kalwe, Thana, some thirty miles up country from Bombay. Ringframes were the first machines to be manufactured, but initially the more precise items,