## The rationalization of production in the swiss textile industry

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## The Rationalization of Production in the Swiss Textile Industry





The use of modern methods and machines can contribute significantly to rationalization, not only in the production area but also in the administrative sphere: here the connections of an IBM machine are being changed to switch over from one operation (despatch papers for an order) to another (stock checking). (Meyer-Mayor Ltd.)

Automatically produced IBM cards inform the experts of the preparations to be made for a new order. (Meyer-Mayor Ltd.)

Wishing to inform the trade press on the progress achieved in Switzerland regarding rationalization and automation in the textile industries, the Office for the Promotion of the Swiss Cotton and Embroidery Industries in St. Gall organized a very well planned press day on November 24th, combining business with pleasure, i. e. a visit to two firms of different types, but both equipped with the most modern means of production, and a sight-seeing trip in the St. Gall Oberland, at the height of its autumnal splendour.

Under the friendly and efficient guidance of Miss E. Kocher, Dr. of Economic Sciences, those taking part, numbering about 50, paid a first visit to the Multicolour Weaving Mills of Meyer-Mayor Co. Ltd., at Neu St.-Johann (Toggenbourg). This is a medium-size firm, originally a family concern, which has developed steadily during the last thirty years or so to become a modern concern equipped with the very latest machinery and

concern equipped with the very latest machinery and fully capable of competing on international markets. It employs about 180 workers as well as a certain number of women working in their homes and is equipped with 150 weaving looms; it produces mainly for the home market, using cotton and linen yarns for the multicoloured weaving of all kinds of textiles for household use, such as household linen, kitchen cloths, table cloths, hand-kerchiefs, sheets, etc. All these articles are produced mainly by the yard and sold finished to the retailer.

Very wisely, the youthful managers of this concern understood that it was much more worth while modernizing and rationalizing production than attempting to expand the works. They therefore concentrated on renewing the looms, introducing mechanical handling and finally, in 1962, took an important step towards the rationalization of production and administration by introducing a conventional IBM perforated card system, which controls simultaneously the receipt of orders, invoicing, payment of wages, allotment of material (control of the yarn, restocking, merchandise in stock, etc.), as well as all related work. In this way the Meyer-Mayor factory has been able to install the most modern manufacturing and delivery set-up, proving that rationalization carried to the fullest extent of its possibilities is also accessible to the textile industry, whatever the size of the firm.

The managers of the firm, who had done everything possible to inform their guests fully, explained with great enthusiasm all the wheels within wheels of the organization and showed them round the works and the brain centre of the factory, that is to say the IBM control room, which aroused particular interest.

After a stop at Sax (Rhine valley) for luncheon in the richly historic Schlössli restaurant, the guests continued on their way to Sargans to visit the entirely automatic and ultra-modern yarn-dyeing works recently opened at Mels by Stoffel Ltd.

Owing to the requirements of rationalization, the dyeworks are located in the immediate vicinity of the spinning mills and the heating plant, and the layout of the different departments has been arranged according to the flow of goods to be handled and the contours of the ground. The card slivers, transported directly from the spinning mill to the dyeing works, are wound on beams which are

then placed in groups of four on a frame and lowered into the vat of the «duo-mat» dyeing plant by means of pulleys. After this operation, the beams are placed in the drying chamber, and the card slivers unwound onto tubes, which are then stored in the warehouse.

The day is past when the dyes and chemical substances had to be painfully mixed by hand and transported by muscular porters, and when the écru yarns were dipped and stirred manually in the vats. Today, in the dyeing room, only two men are employed to supervise the different dyeing appliances, the drying chambers and the vats of preparations. In order to ensure more effective supervision and checking of the dyeing operations, the dyestuffs and chemical substances are fed into the « duomat » dyeing apparatuses along a different circuit from that used for the yarns to be dyed.

For this reason the laboratory preparing the dyestuffs is situated on the entresol. The dyes and chemical substances are prepared in special steel receptacles connected directly

to the dyeing vats by pipes.

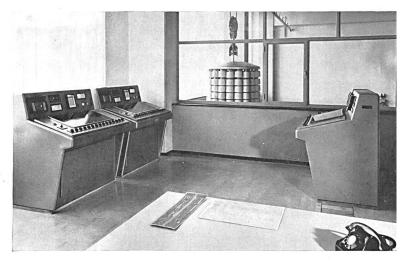
The liquid chemical products and the substances in solution at the proper concentrations, are kept in the laboratory in storage tanks from which the required quantities can be taken directly in a graduated cylinder. The dyes and some of the chemical substances are still poured into the vats by hand. This is the only operation still performed by hand, with the help of perforated cards.

The actual dyeing is carried out in the «duo-mat» dyeing apparatuses, which are of an entirely new conception in the way of dyeing plant design. Built all in one piece in the form of big units, they comprise a double pumping system, making it possible to ensure a rational layout of all control devices. When filling and emptying the apparatus, the two pumps work in conjunction. This creates the most favourable filling conditions for dyeing by avoiding the whole bath having to pass through the yarns to be dyed.

The control panels of the «duo-mat» apparatuses are arranged in the centre of the control room, from where the operator can supervise the dyeing operations while

controlling them from the panels.

The progress of the operations is controlled by the perforated card, on which the programme for each phase in the whole dyeing process has been previously recorded.



Automatic dyeing control room; in the foreground, the perforated card which commands all the operations undergone by the bobbins of yarn. The whole process is automatically commanded by remote control from 3 control desks visible in the foreground. From his control post, the operator supervises the dyeing room and the laboratory for the preparation of the dyes. (Stoffel Ltd.)

The control panel, with the measuring and checking instruments, is equipped with a luminous diagram. The pressurized drying chamber is also equipped with entirely automatic control, so that each batch of cross-wound bobbins arriving from the dyeing room can be dried in the most suitable way possible.

After being warmly welcomed by the heads of the firm, those taking part in the visit were initiated into the various dyeing and handling operations; these new automatic dyeing works are undoubtedly the pride of Stoffel Ltd. and represent a masterpiece of precision and rationalization.

Finally let us thank the Office for the Promotion of the Swiss Cotton and Embroidery Industries for having given members of the press an opportunity to see for themselves the efforts being made in the Swiss textile industry to rationalize its production and in this way to continue to compete successfully on world markets.

Sw.



Yarn dyeing room: the automatic «duo-mat» dyeing apparatuses; in the background, right, the beam frame with the beams on which the card slivers are wound. (Stoffel Ltd.)