



DP Dyers

Case Study

Process Control System Installation

Huddersfield-based DP Dyers is one of the world's leading commission piece dyers of natural and synthetic fibres. Records show there has been a dye house at their current location since 1796, becoming a piece dye house in 1928. The soft pennine water and topography of the countryside made it the perfect location for textile dyeing and finishing – this is as true today as it was 200 years ago. In 1975 the dye house became a wholly owned subsidiary of WT Johnson and was renamed D P Dyers Ltd.

COMPANY
PROFILE

The Challenge

DP Dyers turned to Thorite to advise on the modernisation of its dye batching system. Their existing system was unreliable particularly in back up functions, was inflexible in providing production improvements or additions and lacked facility for data transfer.

Thorite Action

Thorite, the UK's biggest distributor of pneumatic products and process systems, designed and installed a new dye batching control system using bar code technology to measure and batch fabric dye recipes and ingredients. Each dye recipe comprises of a list of dry and liquid ingredients which are mixed in the dyeing machine prior to the fabric dyeing process.

Dry dye powders are manually weighed in the powder room and the relevant bar codes are entered into the system using the bar code reader, to record the recipe progress and for inventory control. Transfer of the dry ingredients to the dye machine is done by hand.

Liquid ingredients are stored in barrels for safety in a chemical bund area. These include acids, alkalis, bleach, dispersing agents, stabilisers and auxiliaries such as softeners and conditioners. When the recipe bar code is entered via the bar code reader the system automatically measures and



batches the correct chemical volumes to fulfil the recipe using specialist flow metres. Finally, soft Pennine mains water is supplied through the chemical bund pipework and the system stops the supply when the liquid ingredients of the recipe are complete and the dyeing process can commence.

Results

The new control system and associated software enables all the existing dye machines to be retained, but ensures totally accurate dye colours to be reproduced whenever required. The DP Dyers installation also included a new full specification server in the Main Office control room plus 2 pc's fully programmed with Ignition

SCADA software This is supported by a 19" panel-mounted PC in the Powder Weighing Room with bar code data entry with associated SCADA touchscreen, 2 operator panels, a pneumatic process manifold operating 20 process valves, 24 barrel level monitoring system and 2 flow metres & electronics in the Production Hall.

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