



INTERNATIONAL Convention on Colorants - 2007



ABSTRACT

Session 5: Paper 2

REACTIVE DYES - NEWER APPLICATIONS

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Reactive dyes, which contain at least one activated substituent that reacts with the fiber, were first introduced by ICI commercially in the year 1956. These are dyes that react with the cellulosic fiber and can be divided into 1) Cold Brand, 2) Warm Brand and 3) Hot Brand Dyes, depending on the temperature of application.

Each of these classes has specific characteristics like fastness properties, SEF profile, brilliancy, build-up etc. It is now evident that the dye business is much more than the traditional chemistry and is more of an interplay of Science, Art and Technology. The growth in the application avenues of dyes has widened with the numerous possible applications of Reactive dyes. In addition to the classical exhaust dyeing and screen printing in recent times, they have found applications in diverse fields like Contact Lenses, CDs, hair colour, Ink-jet-printing (both paper and textile). Of these, Ink-jet printing appears to be the fastest growing application, with a very large number of patent applications being filed in the areas of colours, print-heads, machines, formulations, inks etc.

Digital printing methods such as ink-jet printing are becoming increasingly important for printing of textiles and offer a large number of potential benefits over conventional printing methods.

Mujeeb-Ur-Rehman is an M.Sc. (Organic Chemistry) and a Ph.D. (Organic Chemistry). He has served as a Research Associate at AMU, Aligarh, and then as a Senior Scientist, R&D undertaking independent Research in Vat Dyes Chemistry at Atic



Industries Limited (now known as Atul Limited). He then became Senior Manager - R&D at Atul Limited in the Colours Division, subsequent to which he became General Manager - R&D (QA). His responsibilities include Overall responsibility for New Product Development, Process Modification, & development of New Analytical methods for Vat, Reactive, Direct, Disperse, Sulphur, Acid dyes and Pigments. His role also encompasses Macro and Micro R&D Plan for new product development and Process modification and technology transfer from Lab scale to Plant scale.