New Mordant Colours for Cotton Printing

No. 1
3/4% Azol Printing Red BB extra

No. 2
3/4% Azol Printing Red R extra

No. 3
3/4% Azol Printing Bordeaux B extra

No. 4
3/4% Azol Printing Brown 3 RL

No. 5
Orange: 2/4% Azol Printing Orange R
Violet: 2/4% Azol Printing Violet RR extra

No. 6
Pad: 4/4% Azol Printing Orange R
White: Romalite C + Citrate Discharge
Black: 10% Black for Outlines T

No. 7
Pad: 4/4% Azol Printing Violet RR extra
Yellow: 10% Indanthrene Yellow G double paste fine
Green: 10% Indanthrene Brilliant Green GG double paste

No. 8
Red: 10% Naphthol AS-TR/Fast Red Salt TR
Blue: 2/4% New Gallophenine 5G
New Mordant Colours for Cotton Printing

By Dipl.-Ing. Walter Brehme

No useful purpose would be served by trying to establish whether the fastness demands in the textile industry have been responsible for the development of the manufacture of fast dyestuffs, or whether the production of fast dyestuffs has given the impetus to consumers' growing demand for fastness. Both factors are interdependent. The desire for best possible fastness, in view of the high prices of raw materials, is quite intelligible and justified, and with the dyestuffs available it is also possible to satisfy high requirements in this respect. However, the purpose the textiles have to serve must always be decisive for the degree of fastness; a judicious selection of the dyestuffs is therefore one of the most important tasks of the dyer or printer.

The attention of printers is now directed to a class of dyestuffs particularly suited for upholstery goods and hangings, where the Indanthrens do not come into consideration.

Under the denomination of Azol Printing Colours, the I. G. has brought out a series of chrome mordant dyestuffs for which very good fastness may be claimed in certain respects. The fastness to light may be pronounced to be good, in some cases very good, and the fastness to washing and chlorine very good. This latter property is most important, seeing that hitherto there were only few chrome dyestuffs which withstood even a light chemicking, whilst the new products are practically unaffected by a chemic of 0.7° Tw.

The assortment at present comprises Azol Printing Red BB extra, R extra, Azol Printing Bordeaux B extra, Azol Printing Violet RR extra, Azol Printing Brown 3 RL and Azol Printing Orange R. The two red brands are very similar in tone to a bluish or yellowish Alizarine Red, but their application is much simpler, as they may be printed on the goods without a preliminary treatment. The same applies to Azol Printing Bordeaux B extra which is somewhat clearer in shade and bluer than Brilliant Alizarine Bordeaux R on oiled material. Azol Printing Violet RR extra yields a full, bright reddish violet which by mixing with a bright blue chrome dyestuff, such as Chromoxane Pure Blue BLD and Celestine Blue B, produces beautiful blue-violet shades as could not be obtained hitherto in the same fastness. Azol Printing Brown 3 RL possesses a full, red-brown shade, valuable for modern upholstery materials and hangings, as a self colour and also in mixtures for mode and puce shades, especially on account of its excellent fastness to light. A yellowish orange of very good fastness to light is obtained with Azol Printing Orange R, similar in tone to Alizarine Yellow R, only much brighter and of better fastness to washing than the latter.

The print colours are prepared with acid starch-tragacanth thickening and acetate of chrome. Whilst otherwise 100 parts acetate of chrome 32° Tw. are required per 1000 parts print colour — also for deep shades — the two Azol Printing Red brands, Azol Printing Bordeaux B extra and Azol Printing Violet RR extra require double that amount for complete fixation. Additions of Glycine A as a solvent and of potassium sulphocyanide increase the depth and prevent bleeding on the ground shade during the washing operation. The following recipe is recommended for printing the dyestuffs mentioned:

<table>
<thead>
<tr>
<th>30 parts dyestuffs</th>
<th>100 ° water</th>
<th>40 ° Glycine A</th>
<th>600 ° acid starch-tragacanth thickening</th>
<th>30 ° potassium sulphocyanide</th>
<th>200 ° acetate of chrome 32° Tw.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 parts.</td>
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Acetate of chrome must also be added to the reducing paste.

The printed pieces are steamed for 1 hour in the cottage steamer or continuous steamer, without pressure, being then malted, soaped and dried.

Padding of the Azol Print Colours and discharging to white with Rongalite C and citrate, or discharging in colours with vat dyestuffs, is another way of applying the products. Padding is carried out on a 3 roller padding machine with the hotfluor attached. The padding liquor is prepared in the same way as the print colours, it must only be kept correspondingly thinner. After drying the goods are steamed for 1 hour and then for white or coloured discharging printed with the following discharge pastes:

To be continued
The Indigosols in Textile Printing
By Kerth and Pfeffer

1. Orange: 70 parts Indigosol Orange HR
   Green: 30 parts Indigosol Green AB
   Pink: 20 parts Indigosol Pink IR extra
   Blue: 70 parts Indigosol HB
   per 1000 parts print paste

2. Red: 150 parts Fast Red GL
   100 parts Rapidogen G paste double extra
   Green: 30 parts Naphtol AS—G
   30 parts Indigosol O4B
   per 1000 parts print paste

3. Yellow: 30 parts Indigosol Golden Yellow 1 Gk
   Violet: 60 parts Indigosol Violet AZB
   per 1000 parts print paste

4. Orange: 60 parts Indigosol Orange HR
   Blue: 50 parts Indigosol O4B
   per 1000 parts print paste

5. Pad: 40 parts Indigosol O4B per 1000 parts padding liquor
   White resist: 150 parts Rapid Fast Red GZH paste
   Red resist: 75 parts Rapid Fast Red GL paste
   per 1000 parts print paste

6. Dyeing: Indigo
   Chlorate Discharge
   Red Discharge: 100 parts Indigosol Scarlet HB
   Green Discharge: 80 parts Indigosol Green HB
   per 1000 parts print paste