TECHNICAL TUESDAYS

CROSS DYEING – ITS PROCESS, MERITS AND DEMERITS

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What is Cross Dyeing?

Cross Dyeing is a very popular method in which varied color effects are obtained in one dye bath for a fabric which contains fibers with varying affinities for the dye used. It is a method of dyeing fabrics which are made from more than one type of fiber. For instance, polyester and cotton blend, wool and cotton blend.

In this a fabric consisting of two different fibers is first subjected to one class of dye and then the other class of dye. Each fiber absorbs its relevant class of dye. For example a fabric containing polyester and cotton is first subjected to disperse dye and then reactive dye. Polyester will absorb disperse and cotton will absorb reactive dyes.

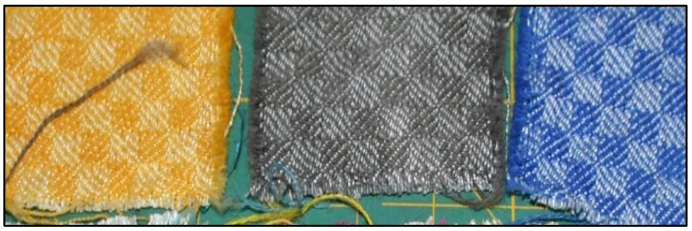

Fig 1.1 – Cross dyed fabrics

Cross Dyeing Method

Method 1 – In this method, the cross dyeing effect is product by combination of yarn dyeing and piece dyeing. First the warp or filling yarn is yarn dyed and the other set of yarns left undyed. Then after weaving the fabric is dyed to dye the undyed part. During this process, the dyed yarn picks up some dyes and overall an effect is achieved.
Method 2 - Dying of fabric composed of two different types of fibers in one dye bath containing two different dyes one for each fiber.
Method 3 – Two separate dye baths are used in this method. The fabric is dipped in both the dye baths. Each dye solution will affect the fiber for which it has an affinity. This provides a colorful effect. However, this method is not very economical one.

Merits and Demerits

- Cross dyeing is a cheaper and a faster way to produce the same effects obtained by other dyeing methods.
- Cross dyeing is often used to create heather effect and strongly patterned fabrics.
- Cross dyeing produces multicolored fabric.
- In Cross dyeing, there is enough chance of unfixed dyes to remain onto the fabric surface causing poor fastness properties. It is therefore recommended to follow proper rinsing and washing off processes at every stage to minimize it.

Wishing you a great week ahead!

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