SILK FIBERS – PART IV

REF: TT/ SEPTEMBER 2018 / WK 3

Coloring of Silk

Dyeing and printing make it possible to bring about the different shades on silk leading to value addition of the material.

Silk being a natural polyamide or polypeptide fibre, its dyeing properties are very similar to those of other natural polypeptide fibre, wool as well as synthetic polyamide fiber, nylon. They can be dyed by similar methods.

Very fine fibrillar structure and high orientation of fibre molecules are the two characteristic properties of silk which determine its dyeing behaviour.

Silk offers almost the entire spectrum of colors and shades as silk can be dyed using a large range of dyestuffs.

Silk is dyed using various dyes - Acid dyes, metal-complex dyes, reactive dyes etc.
Anionic dyestuffs - acid and direct dyes form a 'Dye-Fibre' complex by electrostatic and hydrogen bonds. Silk can also be dyed with basic, metal-complex and reactive dyes.

Acid dyes are widely used for dyeing of silk. These dyes are sodium salts of organic acids (mostly sulphonic acid) and are applied from the acidic medium.

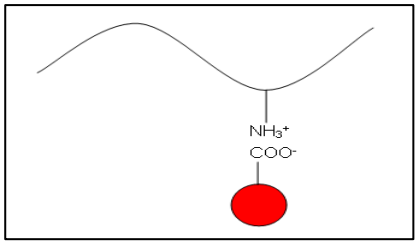

Fig 1.1 Silk attached to Acid Dyes

The dyeing of silk for better dye uptake on the material from the bath requires proper dye containing fewer impurities, maintained pH and recommended a duration of dyeing or drying.
Varieties of machines are available for dyeing such as Tub dyeing, Arm dyeing, Jigger/Winch dyeing etc.

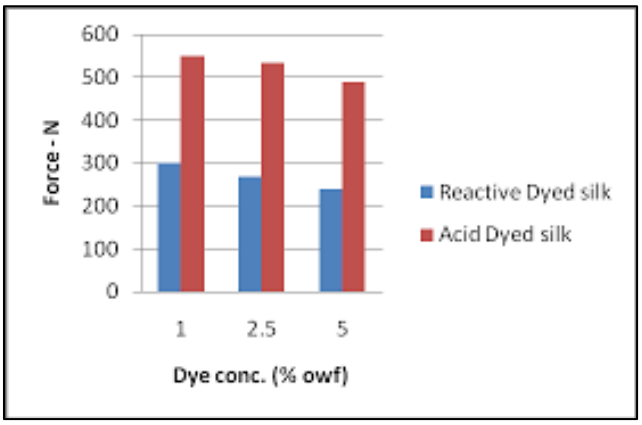

Fig 1.2 Reactive Dyed Silk Vs Acid Dyed Silk

Types of Silk in India

Learn more through this Link to a short video on types of silk.

To be continued…

Wishing you a great week ahead!

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