# Technical Tuesdays

REF: TT/ SEPT.09/WK4

# POLYESTER

## CHEMICAL PREPARATION

Processing aids are applied during sizing of microfilament yarns in order to help and protect the delicate polymer fabric during processing. The common feature of all washing processes is the exchange of substances in an aqueous media.

### PROBLEMS:

- Temperature variations in the batch cause variations in the degree of bleaching
- Poor temperature control can cause fibre tendering
- Variations in reaction time between ends of the cloth on the batch can cause 'tailing' in dyeing
- Efficient and optimal removal of sizes and other processing aids
- Creasing and abrasion marks in the fabric during chemical pretreatments

### **REMEDIES:**

- To minimize creasing, it is important to control shrinkage of the fabric i.e. relaxation should occur under minimum tension
- To reduce creasing, use of suitable lubricating agent is recommended
- Latest Harish JT10 type of jiggers and lately atmospheric pressure jiggers, it is possible to have heat efficiency and liquor spray and D.C. motor drives for uniform treatments
- Variations of these with micro process controls and uniform speeds from beginning to end and with HTHP arrangements can be used for this process
- For the removal of large amounts of oils or fats like oils and spin finishes, precleaning with organic solvents (perchloroethylene) has established itself
- Weight reduction process carried out by caustic soda of concentration 22-25% by weight at elevated temperature of 90 - 95°C under controlled time gives polyester a silk like appearance adapted successfully in India

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