R & D PROJECTS - 2014 & 15

In-house Completed Projects

(i) Project title : Development of FR coated blackout fabric.

Objectives :

- Literature survey on existing practices on development of FR coated blackout fabric used for curtains.
- Collections of blackout fabric and polyester fabric samples (including inherently FR polyester fabric) for the analysis of physicochemical properties .
- Treatment of polyester fabric with FR finish followed by Coating with various coating materials.
- Evaluation of developed FR coated blackout fabrics.

Research outcome :

- Various types of FR blackout fabric have been developed. The fabric samples were coated with three types of coating material using coating machine. The coated material were tested for various properties like heat cutting ability, FR properties etc.

(ii) Project title : Comparing comfort properties of hollow polyester and polyester blended fabric for sportswear.

Objectives :

- To analyze the blended fabrics for comfort properties and compare the results
- To see the application of blended fabrics in the sports wear.

Research outcome :

- Comfort properties of hollow polyester and polyester blended fabric for sports wear have been evaluated and product has been developed.

(iii) Project title : Comparing dyeing behavior of hollow polyester and polyester yarns and their blends.

Objectives :

- To dye hollow polyester and polyester and their blends with various disperse dyes.
- To compare dyeing behavior of hollow-polyester and polyester yarns and their blends using various tools like computer colour matching, spectrophotometer.

Research outcome :

- Hollow polyester and polyester and their blends with disperse dyes have successfully dyed.

- Dyeing behaviour of hollow polyester and polyester yarns and their blends using various tools like computer colour matching, spectrophotometer were evaluated.

(iv) Project title : Development of stretchable knitted fabric.

Objectives :
- To develop stretchable knitted fabric
- To evaluate the characteristic of developed fabric

Research outcome :
- Stretchable knitted fabric has been developed using slack mercerization
- Developed samples have been evaluated

(v) Project title : To study dyeing behaviour of various inherent FR fibres

Objectives :
- To dye the inherent FR fibres with suitable dyes
- To evaluate the colour strength using CCM
- To evaluate fastness properties

Research outcome :
- Dyeing behaviour of inherent FR & FR fibres have been studied & evaluated using CCM.

(vi) Project title : Development of fire & heat resistant multi layered self stitched fabric

Objectives :
- To develop single, double and triple layer of fabric on loom using suitable weave design.
- To analyse various physical properties of the developed fabric for selection of suitable weave structure.
- To create flame retardant property in the selected fabric by application of a suitable chemical finish.
- To evaluate physico chemical properties of finished fabric.

Research outcome :
- Fire retardant multi layered fabric have been developed. The fabrics were single & double layered (cotton, polyester or viscose fabric
- These multilayered fabric samples were tested for physi- cal, chemical and FR properties.

(vii)Project title : Creating FR properties using locally available chemicals in cotton fabrics.

Objectives :
- To develop FR fabric using locally available chemicals
- To evaluate the developed fabric for FR properties.

Research outcome :
- FR Properties in cotton using locally available chemical have been successfully achieved.