

AMTE-27 TECHNOLOGY OF BONDED FABRICS

UNIT-1 FUNDAMENTALS OF BONDED FABRICS

- 1.1 Definitions and classification of bonded fabrics;
- 1.2 Fibres, fibre preparations and their characteristics for the production of bonded fabrics, uses;
- 1.3 Methods of bonded fabric production

UNIT-2 WEB FORMATION WITH STAPLE FIBRES

- 2.1 Production of staple-fibre web by dry and wet methods;
- 2.2 Influence of web laying methods on fabric properties;
- 2.3 Quality control of web

UNIT-3 MECHANICAL, CHEMICAL AND THERMAL BONDING

- 3.1 Bonded fabric production by mechanical bonding
- 3.2 Needling, stitching,
- 3.3 Water jet consolidation;
- 3.4 Thermal Bonding technologies;
- 3.5 Chemical bonding
- 3.6 Binder polymers and bonding technologies

UNIT-4 POLYMER- LAID WEB AND FABRIC FORMATION

- 4.1 Manufacture of Spun bonded fabrics,
- 4.2 Fibre orientation in spun bonded fabrics and characterization of filament arrangement;
- 4.3 Manufacture of Melt blown fabrics
- 4.4 Fibre formation and its attenuation;
- 4.5 Effect of processing parameters on fabric characteristics

UNIT-5 FINISHING AND APPLICATION OF BONDED FABRICS

- 5.1 Dry and Wet finishing;
- 5.2 Characterization, structure
- 5.3 Property relationship in bonded fabrics;
- 5.4 End uses of bonded fabric

References Books:

1. Mrstina V. and Feigl F., "Needle Punching Textile Technology", Elsevier, New York, 1990.
2. Dharmadhikary R. K., Gilmore T. F., Davis H. A. and Batra S. K., "Thermal Bonding of Nonwoven Fabrics", Textile Progress, Vol.26, No.2, Textile Institute Manchester, 1995.
3. Jirsak O. and Wadsworth L. C., "Nonwoven Textiles", Textile Institute, Manchester, 1999