TECHNICAL TUESDAYS

TECHNICAL TEXTILES – PART XIX

REF: TT/ MAR 2022/ WK 4

InduTech or Industrial Textile

Indutech or Industrial textiles is the branch of technical textile that deals with textiles used in various industrial processes such as filtration, conveying, cleaning and other industrial uses. It also includes industrial products like conveyor belts, drive belts, ropes, glass battery separators, bolting cloth, absorption glass mat, coated abrasives, printed circuit boards, printer ribbon, seals, gaskets etc.

PROPERTIES OF TEXTILE MATERIALS USED IN INDUSTRIAL TEXTILES
High tensile strength
Good absorption capacity and capillary action
Resistant to bending and expansion
Micro-organisms, bacteria and heat resistant textile
Able to withstand high pressure
Strong and durable

Different areas of application of InduTech are:

- **The Printed Circuit Board -** The printed circuit board is a mechanical device used to electrically connect and hold electronic components. The technical textile used in the manufacture of printed circuit board is the woven glass fiber which is used as reinforcement along with the epoxy resin. The glass fiber impregnated resin is used to bind the copper foils to give copper laminated boards, called laminates. These laminates are cut into various sizes based on the requirement. The glass fabric used affects the performance of final electronic circuitry built on the printed circuit board.

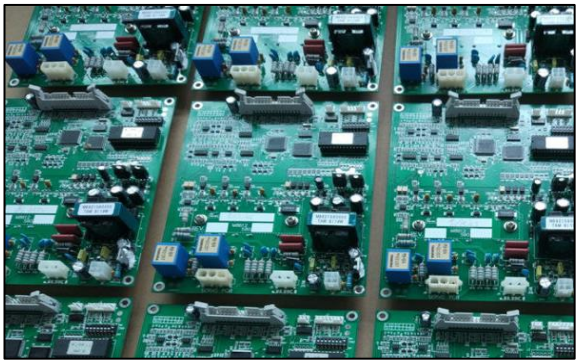

Fig 1.1 Printed Circuit Board

Ref: tomswing.com

- **Ropes and cordages -** The functional specifications of ropes are excellent strength, controlled elongation, abrasion resistance, non-corrosive, flexibility, heat resistant etc.
- **Conveyor Belt -** The conveyor belt is used to move individual and bulk loads. A Conveyor belt consists of three components: Cover, Carcass and Insulation. Belting fabrics are used for reinforcing these conveyor belts. Conveyor belts find major application in cement, mining, thermal power plants, paper, glass, fertilizer and other process industries where there is a requirement for continuous transfer of load.
- **Sound proofing parts** - Nonwoven textile materials are used for sound insulation and sound absorptions applications because of their porous structure. These materials are used as sound absorbers, sound diffusers, noise barriers and sound reflectors. For the sound transmission through friction, the sound waves should penetrate into the absorbent material. The loss of sound energy in textile materials is influenced by numerous physical problems like types of fiber, fiber diameter, material thickness and density, bonding techniques, air resistance and porosity.
- **Computer printer ribbon -** The computer printer cartridge of a dot matrix printer is known as computer printer ribbon. The woven fabric is made using nylon-6 yarn which is cut to the size required for making computer printer ribbon. The required properties for this fabric are high tensile strength, good absorption capacity, capillary action, shock resistant, scratch resistant, good heat resistant etc. These features enable the ribbon to carry ink and withstand pressure during printing.
- **Decatising fabric -** Decatising fabric or wrapper is an industrial fabric used in decatising machines. It is an industrial fabric that is employed in decatising machines. The decatising machines are widely used for mechanical finishing of woven fabrics. Decatising fabrics are polyamide/cotton or polyester/cotton blended woven fabrics.

DECATISING
It is a mechanical finishing process in order to give stabilization to the fabric.
Used for wool, cotton, linen and polyester

References:

1. https://www.technicaltextile.net/
2. http://www.technotex.gov.in/
3. https://textilelearner.net/
4. https://textilevaluechain.in

.....To be continued.....

UNSCRAMBLE THE JUMBLE WORDS
NORBIB
PIACLALYR
UPETRMOC
NIDNGOB

Last week`s Answers: 1) FILAMENT 2) CHANNEL 3) MODIFIED 4) PRINCIPLE

Wishing you a great week ahead!

Technical Tuesdays is a knowledge sharing initiative by Resil Chemicals Private Limited

arc@resil.com | www.resil.com