

TEXTILE TESTING AND QUALITY CONTROL

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TESTING

Before putting something into widespread use, production or practice, the quality, performance, reliability etc. are checked. It finds out how well something works.

Testing can be defined as the process of determining the properties of different kinds of substances.

the properties of different kinds of Textile substances.

TYPES OF TESTING

There are mainly two types of testing,

- routine process testing
- quality record testing.

The result of routine process testing can be got quickly in the working field. The result of quality record testing is to be recorded for different objects to finish the work.

TEXTILE TESTING

- Textile Testing is an important part for textile production, distribution, and consumption. We can also define Textile Testing as the process of determining the properties of different kinds of Textile substances.
- There are certain quality parameters which cannot be visually measured or identified and those things can be measured or evaluated using certain instruments or equipments. This process is called as testing. For ex. Strength, shrinkage, flexibility, color fastness, weight etc. can be measured visually and requires some instruments to measure and evaluate these properties.

QUALITY CONTROL

- Quality control is the synthetic and regular control of the variable which affect the quality of a product.
- The operational techniques and activities that sustain the quality of a product or service in order to satisfy given requirements . It consists of quality planning , data collection, data analysis and implementation and is applicable to all phases of product life cycle ; design, manufacturing, delivery and installation, operation and maintenance.
- In order to maintain the required quality in the product it is necessary to have a well-defined quality control system to validate the quality of the various materials purchased and produced. Quality control is done through inspections and testing.

OBJECTIVES OF QUALITY CONTROL

- To produce required quality product.
- To fulfill the customer's demand.
- To reduce the production cost.
- To reduce **wastage**.
- To earn maximum profit at minimum cost

DIFFERENT TYPES OF TEXTILE TESTING

- **Fibre Tests**

Fibre tests include identification of fibres, grading, fibre length, strength and elongation, fineness, maturity etc.

- **Yarn Tests**

Yarns tests include yarn count, twist per unit length, strength, appearance, evenness and regularity, hairiness etc.

- **Fabric Tests**

Fabric tests include strength and elongation, width, thickness, number of ends and picks per unit length, the count of yarn used, fabric weight per unit length, design and construction of the cloth, air permeability, thermal properties, stiffness, handle, drape, crease resistance and recovery, abrasion, pilling, shrinkage etc.

OBJECTIVES OF TEXTILE TESTING

- **Research-**In case of research, the results of testing will help the scientist to decide which route should be followed.
- **Selection of raw material-**It helps to select the proper raw materials. Raw material is a relative term. As for example, fibre is the raw material of spinner, yarn is the raw material of weaver etc.
- **Process control-** Textile Testing helps to control the different processes. Such as Spinning, Weaving, Dyeing, Finishing etc. End breakage is controlled by controlling weight per lap length, sliver length and roving length. Weaving process is controlled by controlling the excessive breakage of warp and weft yarn. Dyeing process is controlled by $M : L$, temperature and pressure.

OBJECTIVES OF TEXTILE TESTING CONTD.....

- **product control-** , In case of product control, it helps to ensure the fulfillment of the desired quality of the end product. Such as the end product of spinning is yarn.
- **process development-** In case of process development, it helps to improve the quality of end product by avoiding unnecessary waste of time and money.
- **product development-** In case of product development, it helps in continual search for new knowledge and to develop new products.

FACTORS AFFECTING TEST RESULT

- Atmospheric conditions
- Test methods
- Testing instruments
- Technician's efficiency
- Fabric construction/ finishes

If the fabric or garment is given any special finishing like water repellent, anti-bacterial or anti-microbial etc. then it should be tested for those testing also. The testing should be carried out in internationally recognized or buyer approved laboratory and the copies of testing reports should be sent to the buyer or buying office.



THANK

YOU