



Plant & Machinery Inspection

It is very necessary to see the plant and machineries installed at the mill must be standard and upgraded to get the best quality yarn.

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(We at "Ragini International" have tried our best to provide all the necessary information absolutely truth from the best of our knowledge. Even though if there is any mistake, we are keen to hear suggestions.)

For Ragini International

(Authorised Signatory)

1.0 Blow Room

Blow room is the process that takes care of opening, cleaning and blending of different fibres used in the mixing. The technological improvements are remarkable in this process.

1.1 Operation

- Opening
- Cleaning
- Mixing or blending
- Micro dust removal
- Uniform feed to the carding machine
- Recycling the waste

1.2 Machines

Lakshmi/Rieter/Trutzschler/Crosrol

2.0 Carding

High production carding has now become an established practice for short-staple fibres. Production capacity in recent carding machines can be increased substantially without deterioration in quality.

2.1 Purpose

- To open the flocks into individual fibres
- Cleaning or elimination of impurities
- Reduction of neps
- Elimination of dust
- Elimination of short fibres
- Fiber blending
- Fiber orientation or alignment
- Sliver formation

2.2 Machines

Lakshmi/Rieter/Trutzschler/Crosrol/Marzoli

3.0 Draw Frame

Draw frame contributes less than 5% to production cost of yarn. But its influence on quality is very big, because drawing is the final process of quality improvement in the spinning mill and quality of draw frame sliver determines the final yarn quality.

3.1 Task

- Through doubling the slivers are made even
- Doubling results in homogenization (blending)
- Through draft fibres get parallelised
- Hooks created in the card are straightened
- Through the suction, intensive dust removal is achieved
- Autoleveller maintains absolute sliver fineness

3.2 Machines

Lakshmi/Vouk

4.0 Combing

Combing is the process, which serves to improve the raw material. Combed yarn is stronger, more uniform, has greater shine and is smoother and purer. The quality improvements are obtained at the cost of additional expenditure on machines, floor and personnel, together with a loss of raw material.

4.1 Influences

- Yarn evenness
- Strength
- Cleanness
- Smoothness
- Visual appearance

4.2 Machines

Lakshmi/Rieter/Toyoda/Marzoli

5.0 Speed Frame

Roving bobbin is the ideal package form for supply of material to the ring spinning frame. It is very convenient for transport and storing. Eventhough draw frame produces a sliver that already exhibits all the characteristics required for making the yarn; the roving frame is forced upon a spinner as a necessary evil for two reasons.

They are: 1.higher draft 2.drawframe can feeding creates more problems

5.1 Task

- Attenuation- drafting the sliver into roving
- Twisting the drafted strand
- Winding the twisted roving on a bobbin

5.2 Machines

Zinser/Toyoda/Marzoli/LMW

6.0 Ring Frame

The ring spinning will continue to be the most widely used form of spinning machine in the near future, because ring spinning still offers the greatest flexibility in application and supplies yarns of a quality that cannot be equaled by the new technologies owing to technological reasons.

6.1 Function

- To draft the roving until the required fineness is achieved
- To impart strength to the fiber, by inserting twist
- To wind up the twisted strand (yarn) in a form suitable for storage, transportation and further processing.

6.2 Machines

Lakshmi/Zinser/Sussen/Rieter/Toyoda

7.0 Winding

Winding is the process which results in producing a good package of long length and fault free yarn. Most of the spinning mills use automatic winding machines. Quality of yarn and package and winding machine production are improving day by day. The requirements of package quality and yarn quality are also very high for the present knitters and weavers.

7.1 Task

- Extraction of all disturbing yarn faults such as the short, long thick, long thin, spinners doubles, etc
- Manufacture of cones having good drawing - off properties and with as long a length of yarn as possible
- Paraffin waxing of the yarn during the winding process
- Introduction into the yarn of a minimum number of knots
- Achievement of a high machine efficiency i.e. high production level

7.2 Machines

Schlafhorst/Savio

8.0 Conditioning

8.1 Xorella

The standard conventional steaming treatment for yarn is chiefly used for twist setting to avoid snarling in further processing. It does not result in lasting improvement in yarn quality. The steaming process may fail to ensure even distribution of the moisture, especially on cross-wound bobbins (cheeses) with medium to high compactness. The thermal conditioning process of the yarn according to the CONTEXXOR process developed by XORELLA is a new type of system for supplying the yarn package.

8.2 Atmospheric Condition

Atmospheric conditions have a decided effect on textile materials, especially during processing. For this reasons it is essential that the temperature and moisture content of the air within the mill be controlled. The exact degree of temperature and relative humidity will vary depending upon the material and department.

9.0 Compressed Air Power

The textile Industry uses compressed air power in some machinery or other, for instance blow room, comber, spinning frame, loom, spillers to name a few. With the use of more sophisticated, high production machinery the need for more and more complicated Pneumatic controls are necessitated. To have minimum breakdowns and reliable performance with minimum failure, in other words, to have good quality products, the compressed air supplied to the machine should be of the highest order, both in QUALITY and QUANTITY.