

Understand cotton and jute drawing & doubling.

- 7.1 Define drawing & doubling.
- 7.2 State the objectives of drawing.
- 7.3 List the main parts of cotton drawing frame.
- 7.4 State the purposes of jute drawing frame.
- 7.5 Mention the functions of jute drawing frame.
- 7.6 Give the classification of jute drawing frames.
- 7.7 List the main parts of different jute drawing frame.

Carded Slivers are fed into the Draw-Frame and are stretched/Straightened and made into a single sliver. Also, fiber blending can be done at this stage

Tasks of the draw frame

- Drafting
- Equalizing
- Parallelizing
- Blending
- Dust removal

Drafting

The reduction of weight/yard of sliver and increase in length is called drafting. Or Attenuation of sliver without breaking is called draft.

- **Break draft:** Draft b/w the 2nd and 3rd rollers are called break draft.
- **Main draft:** Draft b/w the 2nd and front rollers are called the main draft

Objectives of drafting

1. Straightening of crimped and hooked fibers
2. Paralleling of fibers
3. To produce more uniform of sliver of definite wt/yd
4. To reduce wt/yd of materials fed
5. To make perfect blending/mixing of the component fibers

Waste from draw frame

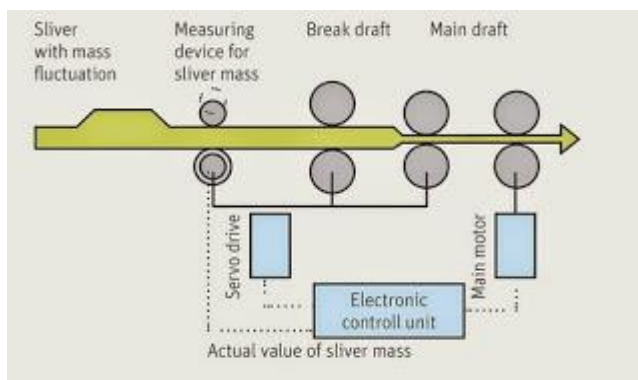
1. Filter waste
2. Clearer waste
3. Sliver cut

Draw Frame

4. Draw frame is a machine for combining and drawing slivers of a textile fiber (as of hemp for rope manufacture or cotton for spinning). Drawing is the operation by which slivers are blended, doubled and levelled. In short staple spinning the term is only applied to the process at a draw frame. In drawing slivers are elongated when passing through a group of pair rollers, each pair is moving faster than previous one.



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6. Importance or Necessity of Draw frame in Yarn Production

7. • To parallelization of fiber and blending the carded sliver, draw frame is needed.
8. • In carded sliver, fibers are present in hook form i.e. trailing hooks and leading hooks. To parallel these hooks draw frame is used.
9. • Majority of the fiber hooks in a carded sliver are trailing hooks while leading hooks are comparatively less.

- 10.· Trailing hooks are also known as major hooks, while leading hooks are known as minor hooks.

11.Actions Involved in Draw Frame

- 12.**Drafting:** It is the process of increasing length per unit weight of sliver. It is mainly due to peripheral speed of the rollers.

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- 14.**Doubling:** The process of combining two or more carded sliver into a single form is called doubling. In draw frame m/c generally six slivers are fed to convert into one i.e. six doubling.

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- 16.**Drawing:** In the cotton industry the term is applied exclusively to processing on the draw frame, where the operation is one of doubling and drafting. Drawing= Drafting + Doubling.

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18.Tasks of Draw frame

- 19.· Equalizing
20.· Parallelizing
21.· Blending
22.· Dust removal

- 23.**Equalizing:** One of the main tasks of draw frame is improving evenness over short, medium and especially long terms. Carded slivers are fed to the draw frame have degree on unevenness that cannot be tolerated in practice and slivers from the comb contain the “infamous” piecing. It is obscured by draw frame.

- 24.Equalizing is always performed by a first process, namely doubling and can optionally also be performed by a second process, namely auto leveling. The draft and the doubling have the same value and lie in the range of 6 to 8.

- 25.**Parallelizing:** To obtain an optional value for strength in the yarn characteristics, the fibers must be arranged parallel in the fiber strand. The draw frame has the tasks of creating this parallel arrangement. It fulfills the task by way of the draft, since every drafting step leads to straightening the fibers.

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27.**Blending:** In addition to the equalizing effect, doubling also provides a degree of compensation of raw material variation by blending. Their results are exploited in particular way in the production of blended yarns comprising cotton or synthetic blends. At the draw frame metering of the individual components can be carried out very simply by selection of the number of slivers entering the machines.

28.**Dust Removal:** Dust is steadily becoming a greater problem both in processing and for the personnel involved. It is therefore important to remove dust to the greatest practical extent at every possible point within the overall process.

29. Dust removal can only be carried out to a significant when there are high levels of fiber. Since a large function the smallest particles adhere relatively strong to the fibers. High performance draw frame is equipped with appropriate suction removal systems; more than 80% of the incoming dust is extracted

