

New Spinning systems

FAQ'S

1. What are all the merits of rotor yarn over ring spun yarn?

Ans:

- a. Fibres are compactly oriented.
- b. More abrasive strength
- c. Production speed is 200 m/min whereas ring spinning production speed is 20 m/min
- d. More uniformity of yarn
- e. Hairiness is less
- f. Elimination of cop to cone winding, i.e Direct package is obtained
- g. Elimination of conversion of sliver to roving

2. What is electrostatic spinning?

Ans: In electrostatic spinning, fibres coming from drafting rollers are charged that forms dipoles of fibres. Twisting element has the opposite charge, due to electric field, drafted fibres are attracted towards it and the yarn is formed.

3. What is the limitation of rotor yarn?

Ans:

- a. Strength of yarn is less due to less migration of fibres
- b. Finer count is not possible

4. How evenness is improved in the rotor yarn?

Ans: Evenness of yarn is increased by means of back doubling

5. How to calculate back doubling?

Ans: Back doubling = Rotational speed of rotor/Lead of the yarn at the separation point

$$= \frac{\pi \times D \times (t/m)}{1000}; D = \text{Rotor diameter}; t/m = \text{twist per metre}$$

$$t/m = \frac{\text{Rotor rotational speed(rpm)}}{\text{Withdrawl speed(rpm)}}$$

6. How much will be the piecing level of rotor yarn?

Ans: 2-3% of piecing will present in the rotor yarn.

7. Why electrostatic spinning is not successful?

Ans:

- a. In electrostatic spinning, charging of fibres depends upon air humidity. S machine need to be air conditioned. .
- b. The charge and attraction of fibres depends upon its mass, so short fibre behave differently from long fibre.
- c. Number of fibres should be controlled in the cross section of yarn.

8. What are the demerits of air-vortex spinning?

Ans:

- a. Controlling of correct, ordered binding of the fibres to achieve adequate strength.
- b. Variability in the twist level of the spun yarn.

9. What are the advantages of friction spun yarn?

Ans:

- a. Low yarn-production cost
- b. Elimination of rewinding
- c. Low end-breakage rates
- d. No wrapping fibres
- e. Optically good mass evenness
- f. Smooth yarn appearance

10. What count of yarn is produced from Dref-2 process?

Ans: Count of the yarn is 0.18-5 Ne; 120-3300 tex

11. What kind of yarn is produced from Dref-3 spinning?

Ans: The Dref-3 spinning system produces bundled yarn according to the friction spinning principle

12. Where the bundled yarn is used?

Ans: It is used in home textiles, sport and leisure clothing, technical products.

13. Which novel is suitable for processing synthetic fibre in rotor spinning? Why?

Ans: Steel novels. Because at higher speeds, steel novel has the advantage of better heat conduction and hence less heating of the fibres, so that fibre damage can be avoided.