FIBRE MIGRATION IN YARN STRUCTURE

Fibre Migration

Fibre migration occurs during spinning both in staple and filaments yarns. The effect of migration is more pronounced in staple yarn than in filament yarn. The outer fibres tend to move toward center of low tension zone and the centre fibres try to move outside. This displacement of fibres during spinning is called fibre migration.

According to Textile Institute (UK), "The change in distance of a fibre or filament from the axis of a yarn during production is called fibre migration."

Effects of Fibre Migration on Yarn Properties

Migration of fibres affects on many properties of yarn. Mainly it affects yarn strength and elongation. If fibres migrate more then strength of yarn is increased and yarn elongation will be reduced.

Factors affecting on Fibre Migration

The factors or parameters on which the fibre migration depends on are-

- Fibre staple length (Higher the fibre staple length higher will be migration)
- Yarn tension (If the yarn is under tension, the fibres in yarn will migrate more)
- Mode of spinning (In ring spinning fibre migration is more whereas in rotor yarn, the strength of yarn is 15-20% less than that of ring yarn. So here fibre migration is very less)