

TECHNICAL TUESDAYS

TOPIC: Twist per Inch in Textile Yarn & Its Role.

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What is Yarn TPI?

TPI (twists per inch or turns per inch) is a term used in the textile industry. It measures how much twist a yarn has, and can be calculated by counting the number of twists in an inch of yarn.

Role of Twist in Yarn:

Twist is needed in yarn to hold the fibers together, and is added in both the spinning and plying processes.

Fine yarns give more strength for less level of twist. For coarser yarn more twist is needed because it is made of (short) staple fibres.

Factors Affecting Yarn Twist:

The twist introduced in the yarn during spinning depends upon a number of factors, such as follows:

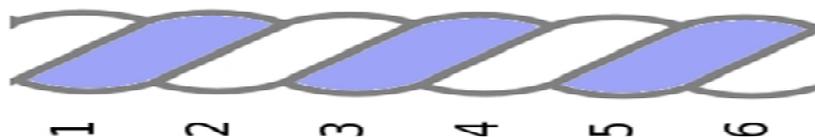
1. The count of yarn to be spun
2. The quality of cotton used
3. The fineness of the fibre being spun
4. The softness of the fabric into which the yarn is to be converted

How to Find the TPI in Textile yarn:

For Plied Yarn:

The number of twists per inch in plied yarn, can be determined by counting the number of bumps in one inch, and divide by the number of singles (the strands plied together to make the yarn).

For Example: In the picture Shows a two plied yarn contain 6 Twist per inch would be 6 divided by 2, So TPI will be 3





For Single Yarn:

The way to determine the twist per inch for a single is to add a contrasting color fibre when spinning it, and then count the number of times the contrasting fiber has wrapped around the yarn.

Another method is to measure an inch of yarn and untwist it, counting how many full revolutions it takes until there is no twist left. This can be done by inserting two paper-clips into the yarn, at an inch apart, thus making it easier to count a full revolution.

With yarn that is both thick and thin, it is best to count over several inches and average them. This is because the number of twists per inch will tend to vary from the thin and thick sections.

Wishing you a great week ahead!

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