

# Y-Tester, for smarter yarn testing

The concept of testing yarn for evenness at the laboratory has two main benefits – to test the yarn and confirm whether its qualities are within the specified limits, and to eliminate periodic faults generated by machines.

The progress in textile digital electronics has opened up new boundaries paving way for newer testing opportunities and reduced cost of testing. TeFoc, in its pursuit of newer technologies, is introducing Investa's Y-Tester, which can be an alternative to the laboratory evenness tester and can provide users with newer opportunities of testing.

Mr. Jan Blasko, Sr., Technical Manager of Investa Uni and former scientist at the Czech Textile Research Institute VUB, has, in association with his former colleagues, developed the Y-Tester, the unique instrument which simplifies yarn testing. With opportunities for more meaningful testing of yarn spinners can produce a consistently high quality yarn throughout.

The use of latest digital electronics and sensor electronics has made the model simple. The system has a control unit attached to an optical sensor – the whole equipment is compact and can be easily carried – with provision of large storage of data, USB connectivity for transfer of data, etc.

The system can check the unevenness of CV% of yarn, U% of yarn, imperfections in yarn, spectrogram analysis, etc. It can also provide detailed statistical analysis of data.

The system can be programmed for testing short yarn length (starting from 8 metres). It can be taken to the ring frame or open end machine, and each spindle/rotor can be tested for short lengths. The unevenness CV% of the yarn produced at each spindle/rotor is measured. If CV% in a particular spindle/rotor is within the average CV% value it could mean that the quality of yarn produced at the spindle/rotor is good and the operator could proceed to check the next spindle/rotor.

As the testing of short length with the Y-Tester takes less than a minute it is possible to check a large volume of spindles/rotors a day and identify those that are producing bad quality yarn. These spindles/rotors, which



Testing on ring spinning

are giving high CV%, can further be checked for longer length of 100 metres and above and measure U%, imperfections, spectrogram faults and count variations.

### Yarn quality studies

Another application where the Y-Tester comes in handy is while studying the performance of various components of the spinning machine. For instance, for components like cots, aprons, spacers, bobbin holders, etc., performance analysis can be done immediately, whereas with the conventional laboratory equipment this study is a long-drawn out process.

With all these data the factors for production of bad quality yarn can be identified and corrected instantaneously.

The system can also be used in ring spinning mills and open-end mills without evenness tester as it this eliminates the need for an evenness tester at the laboratory. As the system is mobile it can be used for checking of yarn anywhere and everywhere.

With all these new opportunities the mills using this equipment can maintain a high quality level and stay above competition.

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