PRACTICAL CASE

High level of yarn count cuts caused by defective drafting aprons in ring spinning

It's vital to find the source of continuous increases in clearer cuts. USTER® *QUALITY EXPERT* alerts the mill to a problem, and Assistant Q quickly points to the solution…

A spinning mill producing Ne 36 combed cotton yarn for knitting, was always operating with around 5 cuts/100 km as an average – but over a certain period, the level of cuts increased to 8 -12 cuts/100 km (yarn count cuts)

USTER solution

USTER® *QUALITY EXPERT* Assistant Q triggered an alarm, alerting the user to a high amount of CCp (Continuous Count positive) cuts in winding (Fig. 1).

Fig. 1: USTER® *QUALITY EXPERT* screen showing the increase in CCp cuts to 8 -12 cuts/100 km.

The spinning mill setup is with linked winders to the ring spinning machines, and the cut increase was noted at only one of these machines but not to the rest processing the same article. So, the spinner focused his investigations on the ring spinning machine linked to this winder.

Assistant Q indicated aprons as a potential source – among a few others – of this problem (Fig. 2).

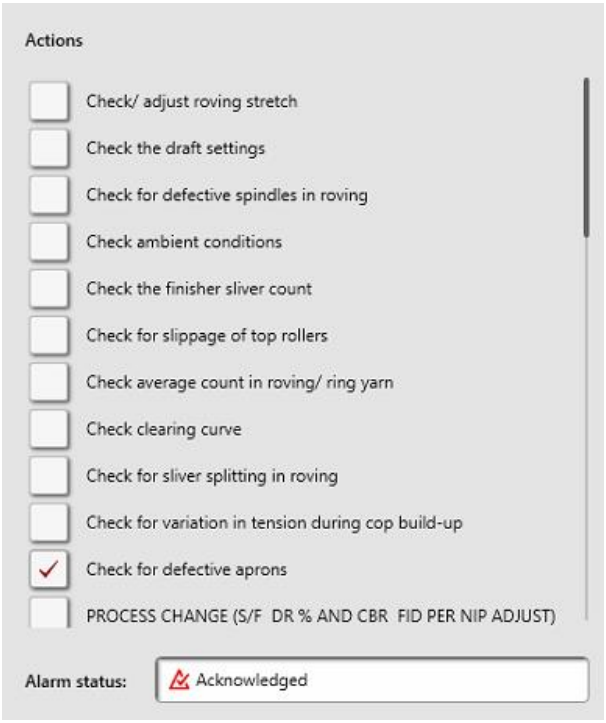

Fig. 2: Assistant Q indication to 'Check for defective aprons' as one of the sources for such problem.

Examining possible differences or issues with this spinning machine, the spinner found that some of the aprons were defective. This was causing long mass variations, thus leading to an increased CCp cut level (Fig. 3).

Fig. 3: Defective aprons which caused long mass variations, leading to an increase in CCp cut level.

The spinner exchanged all the defective aprons and the CCp cuts returned to a normal level (Fig. 4).

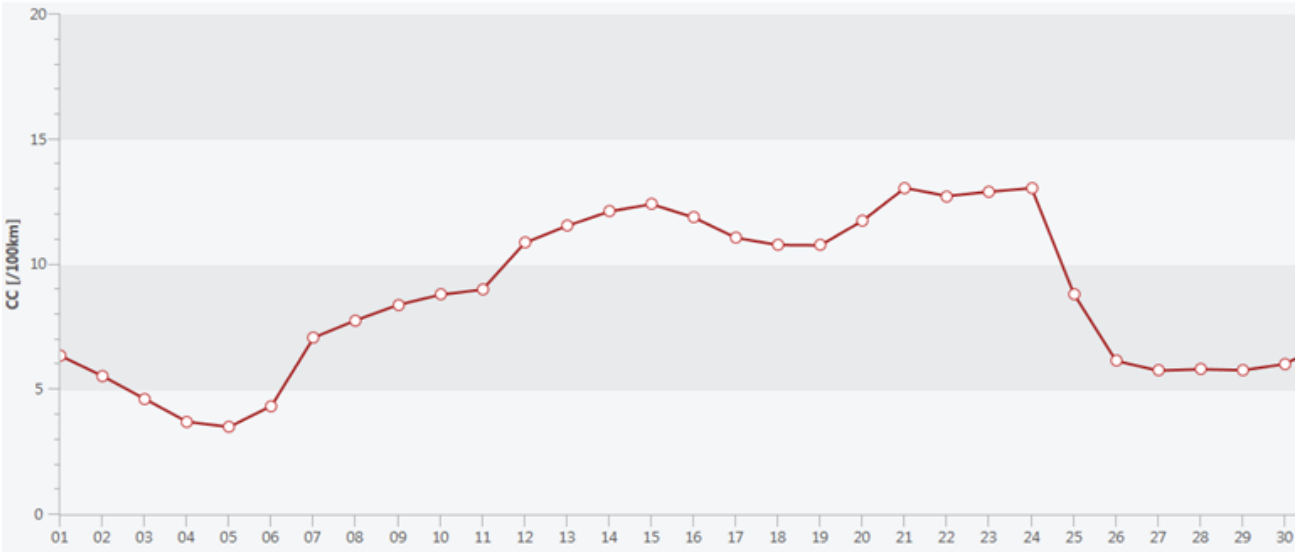

Fig. 4: Graph showing CCp cuts returning to their normal level.

Conclusion and Summary

- Long term variations in mass might be small and lead relatively small fluctuations in cuts. But they can significantly affect the efficiency of the winder and subsequent fabric appearance.
- USTER® *QUALITY EXPERT* helps mills by raising alarms for such significant deviations which occur on a continuous basis.
- The application intelligence of Assistant Q quickly and efficiently guides the process of analysis to find the root causes of such problems.

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