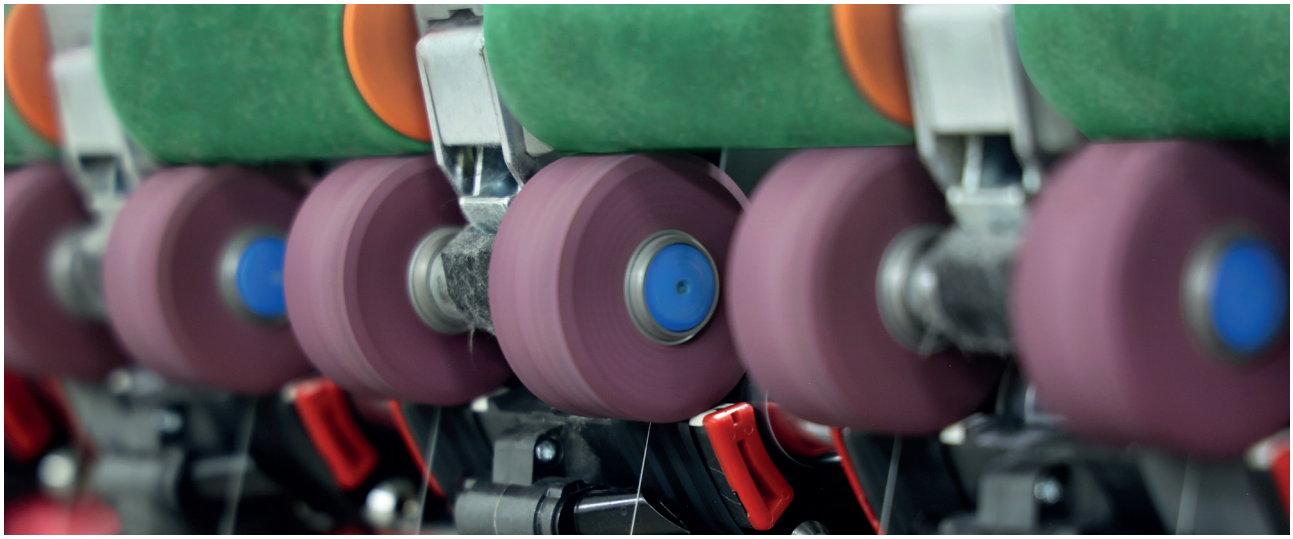
Success Story
After Sales

Xi'an Textile Group Improves Yarn Quality and Energy Efficiency with COMPACTapron



Xi'an Textile Group has upgraded its proven Rieter ring spinning machines G 32 with the compacting device COMPACTapron. This retrofit enables the mill to produce high-quality compact yarn without investing in new spinning machines. For the production of Ne 100 compact yarn made from 100% cotton, Xi'an Textile Group reduced energy consumption per ton of yarn by approximately 22% compared with the competing compact-spinning technology, while achieving better yarn evenness and fewer imperfections.

The Challenge

Xi'an Textile Group installed Rieter ring spinning machines G 32 in 2013. For more than a decade, the machines have operated reliably and remained in good condition.

Increasing competition in the conventional yarn market and growing pressure on profit margins prompted Xi'an Textile Group to expand into the higher-value compact-yarn segment. However, the existing ring spinning configuration had reached its limits in terms of further improving yarn quality. Key parameters such as yarn strength, hairiness and imperfections no longer met the company's requirements for yarns used in high-end fabric applications.

Xi'an Textile Group therefore looked for a retrofit solution that would improve yarn quality and energy efficiency while enabling the company to enter the compact-yarn market without investing in new spinning machines. At the same time, the mill wanted to continue using its reliable ring spinning machines G 32 and retain the flexibility to produce both ring and compact yarn.

The Solution

To meet these requirements, Rieter recommended retrofitting the existing ring spinning machines G 32 with the compacting device COMPACTapron.

Following successful comparative trials with competing compact-spinning technologies, Xi'an Textile Group initially had six machines G 32 retrofitted with COMPACTapron. Satisfied with the results, the company subsequently had ten more machines retrofitted.

COMPACTapron uses Rieter's 3D compacting technology. In the condensing zone, the fibers are transported over the suction slot at a defined distance from the mesh apron. This allows the fibers to be evenly and effectively condensed before twist is inserted. The enhanced fiber integration contributes to higher yarn strength, lower yarn hairiness, better yarn evenness and fewer imperfections.

The optimized suction slot reduces the required airflow and power. The straightforward and reliable design features

only one large cot, reducing maintenance time by 50% and resulting in almost no fiber lapping.

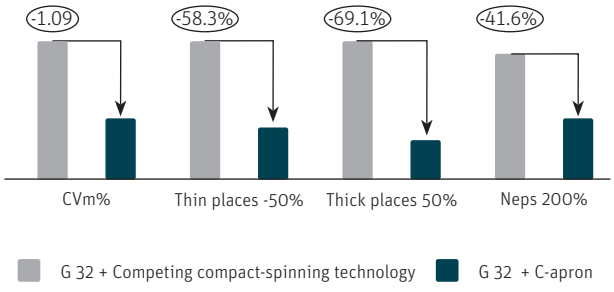
Thanks to its plug-and-play design, COMPACTapron can be retrofitted to various Rieter ring spinning machines. The solution also enables spinning mills to switch flexibly between conventional ring spinning and compact spinning. COMPACTapron therefore provides a cost-effective way to produce compact yarn on existing Rieter machines while improving yarn quality, energy efficiency and operational performance.

The Customer's Benefits

With COMPACTapron, Xi'an Textile Group successfully entered the compact-yarn market without making a large-scale investment in new spinning machines. The retrofit enables the mill to continue using its proven Rieter ring spinning machines G 32 while meeting the yarn-quality requirements of demanding applications.

Tests with Ne 100 compact yarn made from 100% cotton showed measurable quality advantages compared with the competing compact-spinning technology evaluated. COMPACTapron achieved better yarn evenness, 58% fewer thin places, up to 69% fewer thick places and up to 41% fewer neps. A comparative production test also showed approximately 22% lower energy consumption per ton of yarn compared with the competing compact-spinning system tested.

Ne 100, 100% Cotton





The Customer's Statement

"COMPACTapron represents the best solution for retrofitting our spinning machines to produce compact yarn. It helps us improve yarn quality and productivity while offering greater flexibility in producing different yarn counts."

Xie Luyu
Deputy General Manager, Production,
Xi'an Textile Group

In addition, COMPACTapron contributes to higher yarn strength and lower hairiness. Its straightforward design with only one large cot reduces maintenance time by 50% and results in almost no fiber lapping. The mill retains the flexibility to switch between conventional ring yarn and compact yarn and to produce different yarn counts according to changing market requirements.

The retrofit combines better yarn quality and higher energy efficiency with a moderate investment. By extending the lifetime of its existing Rieter machines, COMPACTapron helps Xi'an Textile Group strengthen its competitiveness in the higher-value compact-yarn market.

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