

K 46: Increase of productivity thanks to a high automation



The Esquel Group is a global textile and apparel manufacturer with a vertically-integrated supply chain that ranges from cotton to retailing and uses advanced technology in its production lines. The Group is therefore able to create over 110 million shirts for leading brands and retailers across the globe each year. The company uses Xinjiang's extra-long staple cotton as raw material to produce premium 100% cotton compact yarns (Ne 50 – 700) which are processed by the Group's downstream companies.

The Challenge

In recent years, with the rapid development of cotton textile industry, enterprises are facing the problems of labor shortages and rising labor costs. To achieve sustainable development and to further increase productivity while improving product quality stability and output, in 2016 the Esquel Group initiated "the 30 000 spindles whole-process intelligent demonstration project of Changji Esquel Textile Co., Ltd.". The company hopes to enhance the high-end intellectualization of spinning machines and the technical transformation of front-line operators, so as to meet the market demand and finally drive Xinjiang textile industry to the era of intelligent factory.

The Solution

Rieter has recommended Esquel's management to enhance the compact spinning process with an automatic can transport system, the Rieter bobbin transport system SERVOTrail and the mobile modules Alert and Cockpit of the Rieter mill control system SPIDERweb. Beside high efficiency and high quality consistency, the compact spinning machines K 46 require a fraction of the compacting energy and have less maintenance costs compared to other compacting systems. The Esquel Group has decided to invest in an expansion project in Changji Esquel.





Compact spinning machine K 46 with SERVOtrail roving robbin transport system

The Customer's Benefits

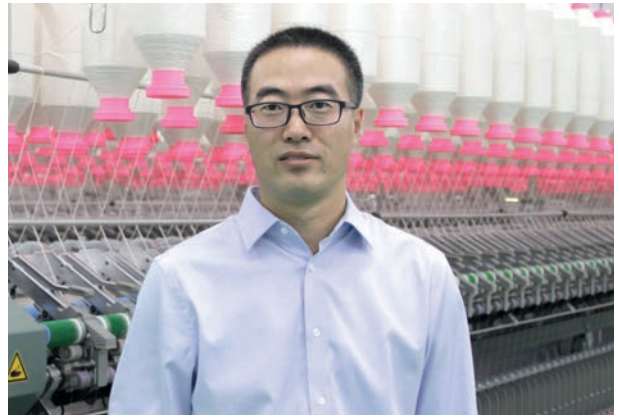
The entire compact spinning production line with 30 000 spindles only requires 45 well-trained employees. The mobile alert of the mill control system SPIDERweb helps the operating personnel to adjust the machine quickly and to prioritize the measures. This results in an improved efficiency of the machine and reduces the energy consumption overall. The cockpit module creates reports of the most important spinning mill data from any location. The spinning process is improved and will guarantee subsequently a stable yarn quality. Thanks to the higher yarn production and lower conversion costs, Esquel has a higher profit and a shorter payback period. The modern facility ensures that Esquel is optimally positioned for the future. The customer's management hopes that Changji Esquel will be a new model of an intelligent state-of-the-art textile manufacturing plant.

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The Customer's Statement

"Relying on the highly automated and complete compact spinning equipment of Rieter, the intelligent spinning project of Changji Esquel has achieved great success. We reduced the manual labor intensity, improved the production efficiency and delivered stable yarn quality at the same time. Thanks to the advanced spinning equipment of Rieter and the experienced management team of Esquel, we could achieve a win-win situation."

Mr. Yang Zhao
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