

Great Performance of the Rieter Rotor Direct Process with High-Performance Card and Autoleveler Draw Frame Module



The Challenge

A Rieter customer in Vietnam uses Rieter rotor spinning machines to produce rotor yarns with various yarn counts from cotton and waste. In the fiber preparation stage, they work with machines from a German competitor. To find out whether the customer could become more productive with Rieter machines, a direct comparison was carried out between the card C 75 with RSB-Module 50 and the competitor's card plus integrated draw frame. Both the competitor and Rieter used a Rieter rotor spinning machine as the end-spinning machine in this comparison. The customer set the Rieter machines the target of achieving 15% higher production with the same yarn quality and waste removal.

The Solution

Rieter was eager to demonstrate the superior performance of its rotor direct process to the customer. After the blowroom, this consists of Rieter high-performance cards, each of which is directly connected to an autoleveler draw frame module, and the rotor spinning machine.

The rotor direct process is the shortest possible spinning process for producing rotor yarn and opens up interesting benefits for spinning mills, such as the ability to process more cost-effective raw materials with a higher short-fiber or trash content into yarns at market-standard quality. For the comparison at the Vietnamese customer's spinning mill, the card C 75 and the autoleveler draw frame module RSB-Module 50 were used. The RSB-Module 50 is characterized by two draft zones for optimum yarn evenness, narrow cylinder distances for processing short fiber lengths, and up to five-fold total draft that can easily be adjusted on the operating unit.

The Customer's Benefits

Trials were carried out at the customer's spinning mill over a period of several months. In these trials, both the Rieter line and the competitor's line were tested with a raw material mix of 63% blowroom and card waste, 25% gin mote and 12% Brazilian cotton to create a rotor yarn of Ne 21. The results showed that production with the card C 75 with RSB-Module 50 was consistently 15% higher with 2.3% less waste removal than production with the German competitor's card and integrated draw frame. The sliver had 13% fewer neps with the Rieter machines. The advantages of the outstanding autoleveling system of the RSB-Module 50 can be seen in the improved sliver evenness and, above all, in the considerably better count stability during can changes. Despite the higher production volume, the yarn quality was much better with the Rieter machines - with 35% fewer imperfections and 8% higher yarn strength.



Sliver produced with the competitor's card and integrated draw frame



Sliver produced with the C 75 and RSB-Module 50

Great Performance of the Rieter Rotor Direct Process

Raw material mix of 63% blowroom and card waste, 25% gin mote and 12% Brazilian cotton, rotor yarn of Ne 21



Rieter card C 75 with RSB-Module 50

Better yarn quality and higher yarn strength at 15% higher production with Rieter machines compared to the German competitor

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3405-v1 en 2103

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