

Godet coating as customer service

The positive aspects of orange peel skin

The quality of the manufactured yarns is also determined by the surfaces of all components coming into contact with the yarn – such as godet jackets, for example. It is here that Oerlikon Barmag provides support with special repair coatings and – often even more important – know-how of how these are deployed.

Depending on the process, yarns also acquire their properties through accurately-defined godet and separator roll temperatures and running speeds. Furthermore, this requires a defined, yarn-friendly surface in order to ensure there is no damage to the filaments. For this, the components in all newly-sold machines come with a chrome-oxide coating as standard. But plasma-coated godets are also used. “In the case of plasma spraying, the aim is to create a so-called orange peel skin with a defined layout of indentations and supporting surfaces. What may sound negative in other contexts can have a positive impact on the yarn quality here”, explains Marcus Köhler, Customer Support Service Manager at Oerlikon Barmag.

Although the surfaces of such coatings may be precisely tailored to the respective processes and products, they do however deteriorate sooner or later – depending on the polymers, spinning processes and process speeds in question. And aggressive alkali cleaning agents can soften the coating over time. To this end, the result can be under-surface corrosion with blistering, which may cause flaking in the worst case.

In such situations, Oerlikon Barmag offers repair coatings, for which it has been collaborating with surface specialist Oerlikon Metco for more than 30 years now. The affiliate has a presence in the primary Oerlikon Barmag markets across the globe. “Together, we restore the original surfaces with all the required tolerances. Depending on the customer request and market requirements, we can also add different qualities or surfaces – for example, hard plasma coatings”, states Marcus Köhler.

Whichever coating solution is chosen – it is important that this is implemented in good time, because it is not just the yarn quality that suffers if not. Faulty surfaces are also associated with higher yarn break rates and more waste per ton of finished yarn. And because wear is usually a slow, gradual process, the reasons for fluctuating or slowly-deteriorating production quality initially often remain unidentified.

This is when Oerlikon Barmag Service can provide decisive and invaluable know-how. “Our experts have the necessary experience and specialized measurement devices to identify and assess wear. They know which surface profile with which roughness depth each godet requires”, explains Marcus Köhler. Here, it becomes clear that there can be many error sources. To this end, the yarn requires different surfaces depending on its position within the production process. If this is not right in the respective position, this will also adversely affect the yarn quality with, for instance, differing diameters or insufficiently balanced jackets and units.

Oerlikon Barmag is able to provide service life guarantees for its repair-coated surfaces – although only if the company's own chemical godet cleaner is used. The service also includes the alignment and calibration of the components. And it is particularly popular among customers: to date, Oerlikon Barmag has repair-coated around 4,000 godets – without any subsequent client complaints.



Caption:
Godet or groove roller shells can benefit from a repair coating.