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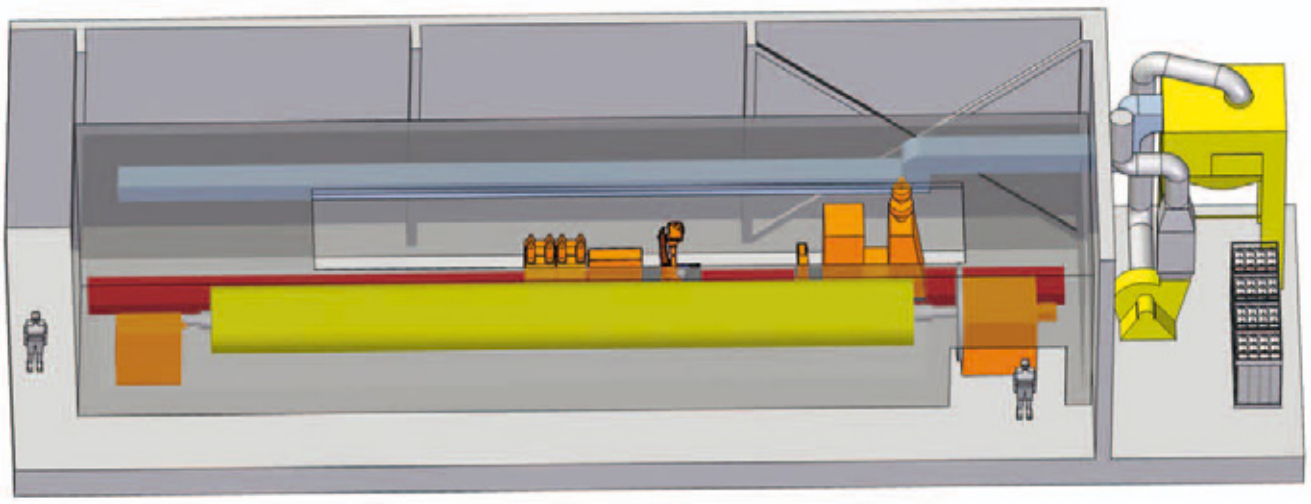


New roll covering line for thermally sprayed coatings (ceramics by plasma process, tungsten carbide by high-velocity process, HVOF) for rolls with a diameter of 2.40 m x 16.50 m length and 40 mt plus other components.

[ROLL COVERS FROM DÜREN]

RICHTER: NEWS ABOUT ROLL COVERS

In August, company Wolfgang Richter will commission one of the most modern lines for thermal roll coverings. With this, the Düren company will enlarge its range by the two new processes of high velocity oxygen fuel spraying (HVOF) and plasma spraying and will thus be able to offer a complete roll service for all types of rolls from one source at its Düren site.

In a production hall of Richter works II, preparations for the installation of the new line are already very advanced and allow to anticipate the dimensions of the rolls that are to be covered here: The largest rolls might have a diameter of 2.30 m and an overall length of 16.50 m, and weigh up to 40 tons. “Of course, here we will also cover smaller rolls by our thermal spray processes. The line is suited for the smallest rolls as well as for the very large ones”, says junior manager Dirk Richter. “We are very proud we will be able to produce a very high quality with this new line.” Roll covers with ceramic or carbide coatings offer excellent resistance to wear and tear, temperature and corrosion, durable smoothness, as well as a wide variety of surface structures and properties.

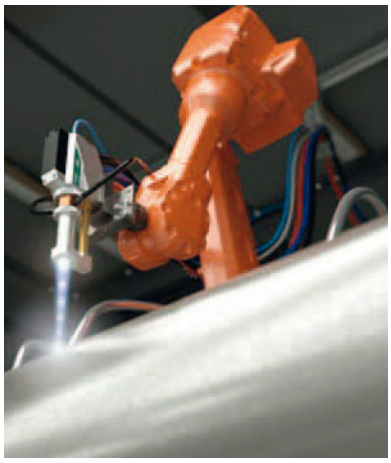
On the new line, a variety of rolls can be covered by the two processes of high velocity oxygen fuel spraying (HVOF) and plasma spraying. “First of all, here we have one of the three largest lines for roll coverings throughout Europe, and then we work with the world’s currently most advanced spray technologies for ceramic and tungsten carbide roll covers”, says Dirk Richter. “With these spray processes, we can now offer hard roll coverings that are suited for all positions and requirements of the paper machine.” This includes, for instance, wire drive rolls and wire guide rolls at the wet end and winder drums, but also the most varied function rolls, such as calender rolls, size press rolls, etc. “We are also proud of the results of a paper guide roll in the back pre-coating group in which colour is applied with highly abrasive titanium dioxide. After all our trials with other coatings had failed, our roll now works in such an excellent way that we have currently two follow-up orders already.”

Strict requirements in respect of emission and noise protection

In order to be allowed to operate the new spray unit at the Düren site, Richter had to meet strict requirements in respect of emission and noise protection. After all, around 130 decibel was reached at the plant – this is the noise produced by an aircraft engine. This is why the plant was completely encased in the production hall. Moreover, the fine dust particles of the spray materials are filtered, collected, and professionally disposed 100% from the air via a modern filter system.

To shorten the ramp-up time for sales, Richter has had reference rolls on the market for nine months already. These were manufactured by a sub-supplier with comparable plant technology as per the company’s exact specifications. “At this, we not only specified the spray powders to be used but all other parameters as well.” Richter customers already using these rolls were very satisfied and had already placed repeat orders for rolls covered by these processes. Customers had been enthused by the attractive introductory price of the reference rolls that are so important to Richter, and by the good price-performance

Ceramic-coated wire drive roll and wire guide roll from the wet end of a paperboard machine



Tungsten carbide roll coating of a calender roll by HVOF process

New spray booth during assembly, showing Wolfgang Richter (left) and Axel Pesch

ratio of the coverings supplied, and had ordered more rolls, even after prices for repeat orders with the same coverings had to be slightly increased. "We will maintain this introductory price level that is still extremely attractive up until the end of the year", says Dirk Richter.

For interested customers, the company's field staff will be pleased to make appropriate contacts. In order to produce rolls of merchantable quality and even better, Richter, according to its own statements, has acquired much valuable know-how for most of the rolls, gathered information from various consultants, carried out analyses on existing rolls, and has conducted many conversations with customers with experience in roll technology.

Originally, the thermal spray unit was to be commissioned six months earlier. But due to the take-over by Richter of Mesera in Karhula in Finland (see apr No. 4/2013), the installation was then delayed).

Roll covers from Karhula

There, since completion of take-over negotiations, incoming orders in respect of the flagship products had developed in a very positive way, that is, for G-Cover and grooved stainless steel press roll covers sold by Richter under the name of G-Groove, as well as Yamauchi calender roll covers "MirrorMax". Additionally, Richter was optimistic about the future, in that G-Cover would no longer be used in the white paper production only but in the brown paper production as well, that is, in the manufacture of both packaging papers.

According to information provided by DS Smith de Hoop (formerly SCA), Willy Vonk, a G-band by Metso has been running very successfully for months at the company's plant in De Hoop in the Netherlands. Furthermore, Richter emphasises that the further development of this technology had not led to a fundamental shortening of the felt running times, although this had been brought forward as a favourite argument against this type of rolls. Under appropriate conditions, no differences could be found vis-à-vis PU [polyurethane], so that only advantages of the G-Cover in the form of longer running times and more constant and excellent production conditions emerged. In comparison with PU rolls, the higher acquisition costs readily quoted were also quickly redeemed due to less roll changes and a lower need for maintenance. "In the right position, the G-Cover is unbeatable if compared to PU covers."

» Ceramic and tungsten carbide coatings for maximum durability. «

More PU covers in the future as well?

Moreover, currently the existing PU covering line for reels at the new works in Karhula was being analysed and possibilities were fathomed as to whether, along with the reel coverings that had been applied there for the last 20 years, other qualities in PU could be produced there in future as well. Alternatively, however, negotiations were also being conducted with the respective suppliers about closer cooperation between PU and rubber.

But first the new thermal spray unit in Düren is scheduled to be commissioned with an official opening ceremony in August. Among the guests will also be those customers who currently already work with the reference rolls. Dirk Richter: "And, of course, samples rolls can also be viewed on location." Furthermore, the company is planning for the future specialised training on the subject of thermal spray coatings, as there was still "a lot of secretiveness" surrounding this technology. | DB