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OraCrepe™ Next: next-generation creping

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INTRODUCTION:

In order for 'flexibility' to be synonymous with 'reliability' it is necessary that a Yankee doctoring system fully meets the needs of the production process, which, by its very nature, is influenced by a series of variable parameters.

High product quality and production variability (always taking into account the different process conditions) are the peculiar characteristics of the modern tissue market, which requires high-level performing machines.

The choice between a rigid or flexible doctoring system, therefore, is carefully considered on the basis of the characteristics of the machine and the type of production (production speed, paper width, paper weight) and it is not necessarily definitive.

That's what the Oradoc and WEPA case history is all about: a change of strategy that led to a tangible improvement in production level, as well as leading to the development of a new product now available in the range of doctoring solutions provided by Oradoc.

With hundreds of flexible Yankee blade holders (branded as "OraCrepe™") installed all over the world, Oradoc can certainly boast a consolidated experience both in terms of highly customized design and assistance during installation and maintenance.

But what makes a company competitive in the market and in line with the times is its ability to keep pace with customers' production needs, welcoming their requests just to turn them into solutions that are innovative from a technological point of view as well as reliable and performing.

This is how OraCrepe™ becomes OraCrepe™ Next.

Maurizio Tomei, Sales & Customer Service Manager of Oradoc, summarizes the genesis of this venture as follows: "The project was born from the combination of two main aspects: from one side the will of Oradoc R&D department to develop a new flexible doctoring system for the Yankee cylinder, on the other side the need of Fosso Ralletta WEPA plant to replace the existing PM16 creping system - a rigid and obsolete solution - with a flexible Oradoc one."

"We had already adopted standard OraCrepe™ flexible solution in 2005 on PM17 - explains Stefano Chiocca, Production Manager at Fosso Ralletta plant - and we had been able to obtain significant improvements in the production process. We know and we have appreciated Oradoc expertise for many years, as Oradoc doctoring systems are installed in our factories both in Italy and abroad".

Figure 1: OraCrepe Next.



“PM16 is a double wire machine that can produce premium quality toilet paper. Two years ago we decided to change the set-up of the machine for production needs, so that’s the reason why we decided to replace the old rigid doctor with a new flexible one, as we already did on PM17” explains Saverio Grimaldi, Production Manager at Fosso Ralletta plant.

The devised technical solution stems from the consolidated experience that Oradoc has gained over the years on OraCrepe™ blade holders for the Yankee area, adding however some technical improvements aimed at increasing and optimizing the system in terms of performance, reliability and maintainability.

“The R&D project had as its starting point the technical characteristic that distinguishes the flexible blade holder: self-profiling, i.e. the ability to automatically adapt its shape and that of the blade to the Yankee crown profile - underlines Andrea Orlandini, Oradoc Operations Manager - With this in mind, the design of the blade holder and the various components were also reconsidered, with the aim of increasing their performance both in terms of operation and maintenance. “

“An innovative, independent system for controlling the blade load on the edges, a compact and robust design and a different pressure system complete the new flexible OraCrepe™ Next blade holder” explains Lorenzo Romei, Oradoc project engineer, who followed this product from the start “We highlighted the OraCrepe™ features that could be improved. As a result, the new blade holder design is more stiff and compact, and its independent elements allow for easier maintenance. The new pressure kit features high-quality hose and sleeve spark-proof material, while the new hose support enables easier replacement and consequent reduction in shutdown time.”

To assess the performance of the new OraCrepe™ Next, WEPA also decided to install the OraTec™ FX-20 system to monitor the creping process in a continuous way, with sensors integrated inside the doctor beam, a solution already adopted in other plants of the group.

“Two years after installation, we can certainly say that OraCrepe™ Next has proven to live up to our expectations, solving some problems of paper passage and difficult maintenance that we encountered with the previous rigid system” underlines Stefano Chiocca “No start-up problems and great reliability in following tests, easier ordinary maintenance and excellent quality of the finished product.....we are very satisfied”.

The very strict validation process identified 5 KPIs, which were constantly monitored over time: blade load, blade lifetime, softness grade, coating and fibres’ build-up issue, all of which improved significantly or disappeared, as in the case of fibres’ build-up.

“In projects of this level it is important to be able to collaborate with the right partner to build a business you can be proud of. We had the opportunity to share this project with WEPA, who agreed to host the pilot installation of OraCrepe™ Next in their Fosso Ralletta plant. A special thanks goes to WEPA Italy and to all the technical team that was involved in this project “concludes Tomei.

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Figure 2: Overview of OraCrepe Next installation.

