

HF digital step-up

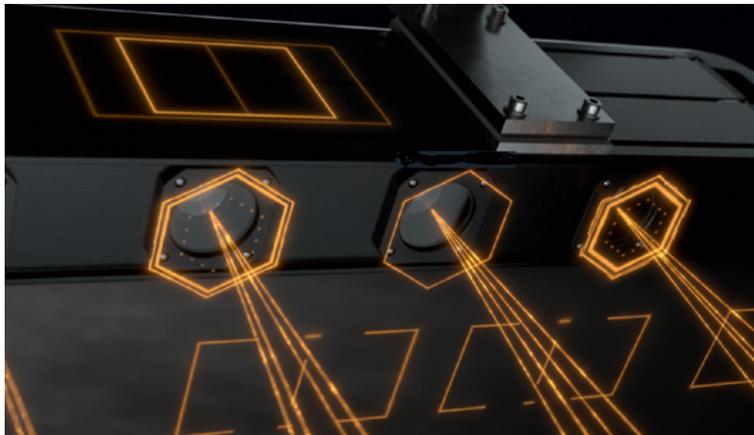
ERJ interviews the head of HF Tire Tech Group's newly formed Digital Solutions unit

Machinery major HF Group is looking to step up its approach to developing and providing digital technology-based products and services to the tire and rubber industries.

Leading delivery of the strategy is Dr Bernd Pape, who recently joined the Hamburg, Germany-based company with extensive machine-building experience outside of the tire industry.

As head of HF Tire Tech Group's newly established Digital Solutions unit, Pape's remit is to strengthen the equipment maker's approach to the development and delivery of digital solutions to customers.

The focus, he said, is on how HF designs and produces digital products, gets them to market and connects all of its machine-building competencies – in tire-building and curing – with digital capabilities.



feedback to the machinery maker's key capabilities and how it leverages these strengths with digital technologies.

In developing new products, machine builders typically don't talk quite so much to their customers and suppliers enough because they believe they can draw on existing experience about the technology and processes, noted Pape.

"For digital [technology] you need to really reach out to customers to find the benefits of any new development for them," said Pape, noting that networking is an intrinsic aspect of IT and process integration.

This, he added, might require different styles of working: asking tire producers about their digital strategies and getting better data from production to build better machines. "A lot of value stems from getting to know the machine and processes even better than before."

Pape admitted that "it is always a discussion" about what data can be shared but believes agreements can be reached: "But it's a win-win situation: customers get immediate feedback on any data they share with us to improve their own production and maintenance operations, while also enabling HF to do better machine engineering for them."

Advanced condition monitoring and predictive maintenance capabilities will clearly be important elements of the Digital Solutions

toolkit, with Pape considering the introduction of new HF digital products and apps in this space.

Indeed, one of the initial projects at Digital Solutions involves the application of digital technology to keep cycle times of curing presses at optimum levels – for example by focusing closely in on the movement of mechanical parts and the use of advanced sensor systems.

In tire production, cycle times can often increase unnoticeably, due to 'process drift' linked perhaps to wear & tear or particular settings, Pape explained. So, a machine that takes 12 minutes and 30 seconds to cure a tire, might need 13 minutes after a couple of months.

"We can do very detailed monitoring to find which part of the machine is starting to be slower," he said. "This gives an early warning to maintenance staff to look at this previously unnoticed problem and resolve it."

Highlighting the potential benefits to customers, Pape said this approach "will help to keep cycle time on a consistently low level so the machine produces more tires. And if we calculate this by the number of presses in the factory, then that gets interesting."

So, HF is seeking new partnerships with customers looking to improve their curing processes, for instance by further optimising cycle times, said Pape, who expects to apply similar approaches to

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DR BERND PAPE



In an interview with *ERJ*, Pape described his new employer as "a really strong, traditional machine-building company with excellent engineers and neat software and automation solutions."

But Digital Solutions is a "whole new product segment," said Pape, adding that HF is approaching this "as if we were building a completely new type of machine. One that has never been seen before."

Key to doing that, he said, is to ask customers about what they really need and then relate that

tire-building machines.

Again, his message in terms of digitalisation is: "Let's set aside trying to be first and a technological leader and so on. Just go out and ask customers, 'what do you need? How can we help you?'"

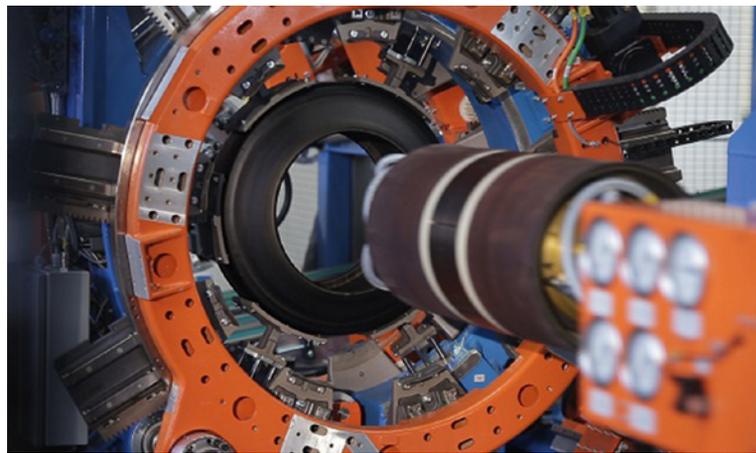
"In digital, when you are doing something new, you often have to take a step back, and say, 'Hey, why are we doing this? Why are our customers doing this? Let's talk about this.'"

Partnerships

HF's Digital Solutions team is also looking to establish new partnerships within the industry, Pape commenting "You don't need to do it all by yourself.

"For me, the first partner would always be the customer, because when we need to try out the solution, we need to talk to their maintenance people and see how they address document issues, maintenance issues and how they document and record them."

But Digital Solutions is also keen to partner with suppliers, including automation technology, software providers and integrators "to



left and right" of the machines HF brings to the industry.

HF, said Pape, could thereby target areas such as final inspection: "From the curing press perspective, for example, we know something about the quality of the tire we cure but the real answers you get from final finishing and inspection.

"If you can close this feedback loop between the quality management and production teams, then you can think of the whole value-chain and the step-wise

integration of different partners."

Moreover, such partnerships can also help to bridge skills gaps particularly in the field of automation and software development, where according to the Digital Solutions leader, "hiring workforce is quite hard."

Digital projects, he noted, usually involve "cross-functional teams bringing together people with different competencies for example in automation, software and mechanical engineering. Again, partnership is key."

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