

Next generation manufacturing technology Gurit and Voith bring prepreg stacks to a next level

“...a new, radical technical solution to make the manufacturing of CFRP parts much faster, easier and more flexible...”

These endeavors always occupied the mind of Gurit Technical Sales Manager Piet Heydorn while out in the field identifying customer challenges and searching for new solutions to benefit our industry.

In summer 2020, he had a meeting with an old acquaintance, Andreas Silvan, Program Manager Prepreg Stacks at Voith Composites. This meeting brought him closer to finding answers to these manufacturing challenges.

In recent years, Voith developed a direct fiber placement technology called the Voith Roving Applicator (VRA). It allows for the manufacturing of near net shape dry fiber 2D stacks in a completely automated process, laying up optimized and tailored stacks structures with local reinforcements and a free choice of fiber angles.

In the meantime, Voith further developed this technology and machinery which is today known as the “Voith Roving Applicator (VRA) NextGen”. This breakthrough innovation allows a fully automated manufacturing process of prepreg stacks which are easier to handle and to apply, radically shortening the process chain. This new generation of prepreg stacks offers the same benefits as those from their dry counterparts mentioned previously – with a near-net shape, a full design freedom, and a fully robotized lay-up.

Ideas arose during this meeting, and those ideas eventually developed into a strategic partnership. Gurit and Voith joined forces to develop a joint solution. Gurit brought their extensive chemical knowhow and market knowledge, while Voith brought their innovative fiber placement technology and experience of the automotive industry.



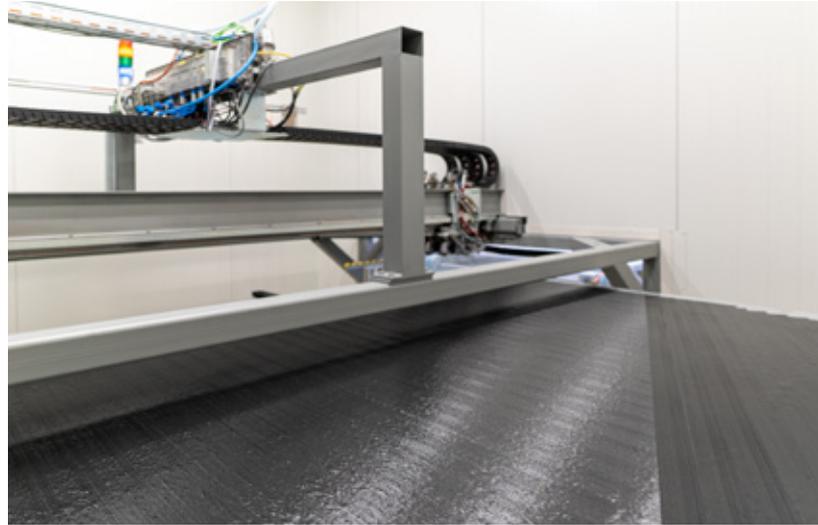
Andreas Silvan
Program Manager
Prepreg Stacks at
Voith Composites

“I’m truly happy that we could win Gurit as a partner. Their technical expertise, their broad product range, as well as their flexibility and motivation to bring this new technology to life, now enables us to offer a truly unique and strong value proposition to our clients, allowing for an up to 70% saving in production time.”



Piet Heydorn
Technical Sales
Manager EMEA

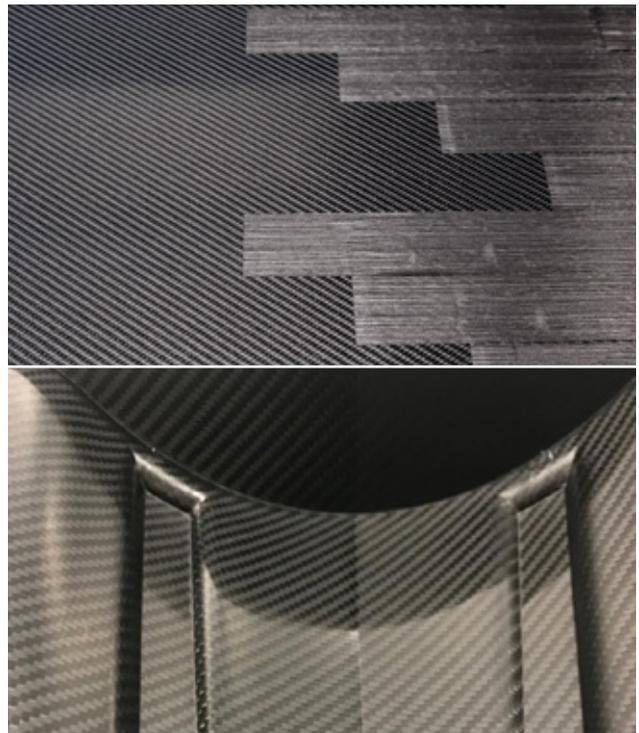
“The Voith Roving Applicator NextGen brings the manufacturing of composite material to an all new level. It is a very innovative way to process CFRP material which is flexible, automated and offers an impressively high quality. Our pilot customers are delighted, and so are we.”



These prepreg stacks are based on Gurit material – either Gurit slit tapes for certified prepreg requirements or Gurit resin taped by Voith for a for maximum production flexibility – both types are manufactured with Voith’s VRA NextGen. A Gurit surface layer adds to the outstanding surface quality, making the stacks suitable for visual applications in addition to meeting high structural requirements.

Besides their high quality, the stacks are very easy to handle and process, significantly reducing manual labor by the customer. The drapability has been particularly praised by first pilot customers; it makes the stacks a great fit even for complex geometries. One of the greatest benefits, however, is that these stacks set the basis for mass customized composites as the technology allows both for large series and for very small lot sizes.

This is an actual game changer, making composites accessible to a much broader range of applications, and providing truly tailored stacks.



Voith Composites
Daimlerstraße 27
85748 Garching
Germany
www.voith.com/composites

Contact:
Piet Heydorn
Technical Sales Manager
EMEA
+ 49 (0) 162 2434 968
Piet.Heydorn@gurit.com

Andreas Silvan
Program Manager –
Tailored Stacks
+ 49 (0) 33701 3286 11
Andreas.Silvan@voith.com

