



Process validation and prototyping Voith Composites

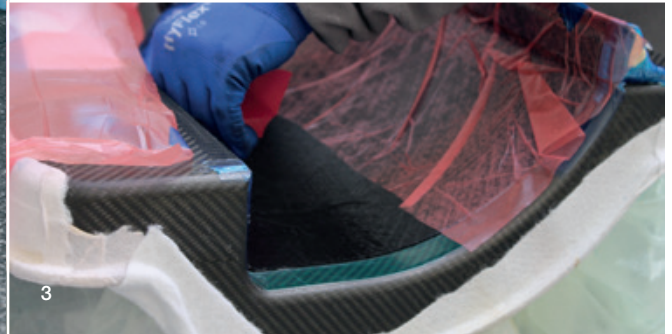
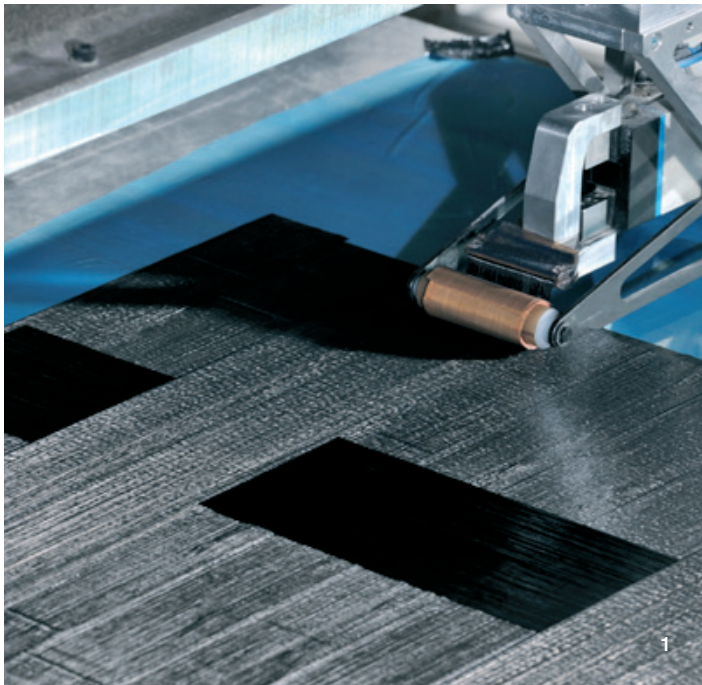
We turn your ideas into reality.

Customers have access to our well-equipped technical center. Supported by our experts, here they have the opportunity for intensive material and process development and testing, right up to the production of first prototypes. The technical center and individual areas have secure, restricted access and guarantee a high confidentiality of the tests.

Voith Composites analysis laboratory ensures that the examination of work outcomes is done directly on the spot. Material properties such as laminate quality can be evaluated through various methods. For example:

- Microscopy
- Universal testing machine Zwick (250 kN)
- Differential scanning calorimetry (DSC)
- Thermogravimetric analysis (TGA)

Voith Composites uses optical and tactile measuring techniques to check the dimensional accuracy of components.



- 1 VRA: Manufacturing of a pre-impregnated, tailored stack
- 2 Component quality check through optical measurement
- 3 Manual draping of prepreg

For a sustainable process development and realization of prototypes, the following processes are available and can be used:

- Tool design and manufacturing
- Molding, preforming, draping
- Cutting
- Milling
- Prepreg sampling
- Vacuum assisted process (VAP)
- Vacuum assisted resin infusion (VARI)
- Press compression molding
- Resin transfer molding (RTM)
- Oven and autoclave curing
- Automated assembling
- Pick and place operations

An extract of our machinery for process development and validation:

- Resin preparation – mixing stations
- Filament winding machines
- Voith Roving Applicator (VRA), dry and prepreg tape process
- 2D/3D cutting cell
- Robots for ultrasonic trimming
- Double diaphragm forming
- 10 000 kN RTM press
- Large-volume convection ovens
- Milling machining cells
- Flexible robot fields

Certified according to:

- ISO9001
 - ISO14001
 - EN9100
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