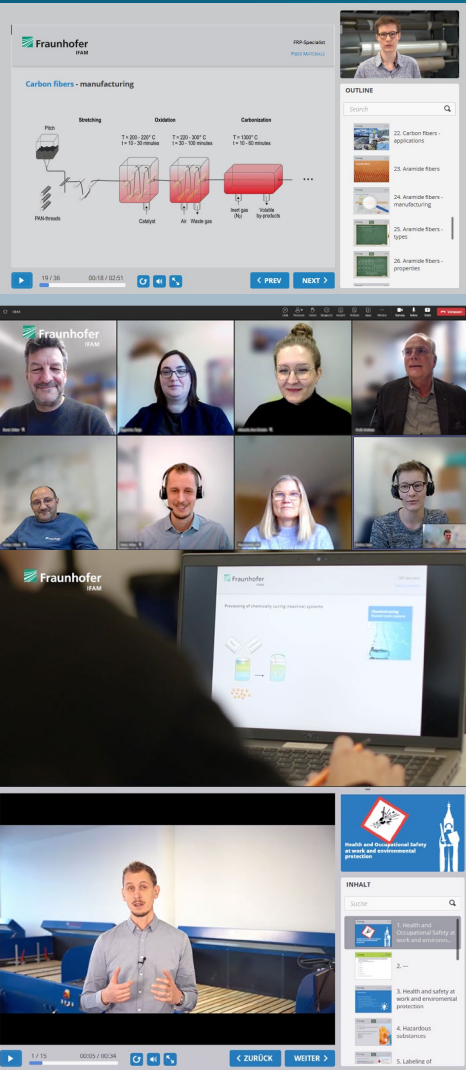


Course structure and content FRP-Specialist



Self learning phase with high quality online learning materials



Technical check **Live-meetings (kick-off, repetition, questions)**

Introduction and materials

- Introduction into FRP
- Health & safety at work and environmental protection
- Plastics
- Processing characteristics and properties of typical thermoset and thermoplastic matrix systems
- Fibers and their properties
- Textile semi-finished products
- Pre-impregnated textiles
- Preforms
- Sandwich construction and properties of core materials

Manufacturing

- General aspects in manufacturing (mold making, release agents, in-mold coatings)
- Manufacturing methods (hand lay-up, vacuum bagging, vacuum infusion, RTM, autoclave curing, pultrusion, press methods)
- Post-processing / machining

Repair

- Damage mechanisms
- Destructive testing
- Non-destructive testing
- Damage classification
- Damage removal and pre-treatment
- Repair methods (gelcoat repair, filler repair, matrix injection, doubler repair, scarf repair)

Hands on training Weekend



Practical and oral examination

Manufacturing

- Hand lay-up
- Hand lay-up with complex shape to test drapability of different textiles
- Vacuum-bagging with wet lay-up
- Vacuum bagging with reactive prepreg lay-up and autoclave / oven curing in comparison
- Vacuum infusion

Repair

- Calculation of scarf ration for bonded scarf repair
- Linear scarf repair on monolithic laminate
- Circular scarf repair on sandwich structure

Testing

- Destructive testing of pure resin samples
- Destructive testing with different composite materials

