

Development of intelligent tank carrier systems for hydrogen-powered vehicles - "SmartHydro"

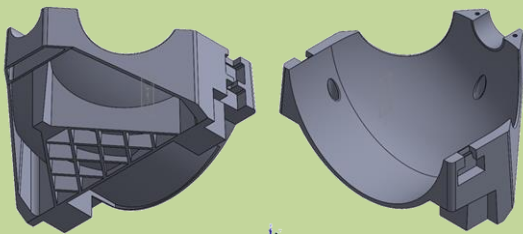
The task of the SmartHydro project was to develop a tank support system for cylindrical pressure vessels in the rail vehicle sector that is characterised by the functional integration of health monitoring systems and large-scale production.

The requirements for the component can be summarised as follows:

- Component loads of +/- 6 g for requirements in the rail vehicle and automotive sectors
- Operating pressure from 350 bar to 700 bar
- Operating temperatures from -40 °C to +80 °C
- Production cycles of approx. 60 s for FRP components
- Integration of electrical and electronic components directly in the manufacturing process
- Strain sensor-based monitoring against critical component failure

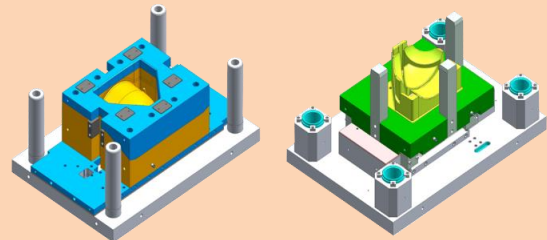
Project partners and areas of responsibility of the research project

Development of the functional model



cetex 

Mould design and construction and component manufacture



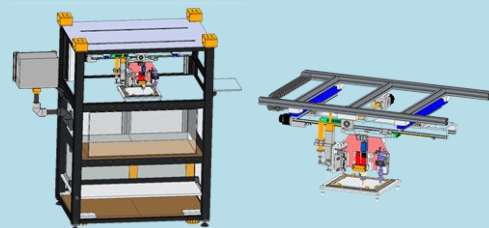
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Development and integration of sensors and evaluation electronics



Development of an automation system for contacting the sensors

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