

## Institute for High Integrity Mechatronic Systems (ZMS)

# Thermodynamic Characterization of CO2 and Pump **Simulation**

The ZMS works on the research for the safe storage of CO2 in subsea deposits. As part of the research we look into a novel barrier test unit which is supposed to operate with CO2.

#### We offer:

- Theses (Bachelor or Master) and research masters (MSD) with subject-specific supervision
- Flexible working hours and independent
- Practical experience in the field of applied Research
- Young and motivated team

### Your profile:

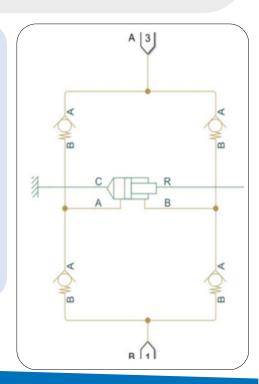
- Degree in mechatronics, electrical engineering, computer science or similar degree programs / relevant work experience
- Knowledge in Matlab
- · Passionate to learn, highly motivated, responsible, independent

#### Your tasks:

- Characterisation of CO2 and its states with a focus on the liquid and gaseous phases
- Thermodynamic analysis of CO2
- Setting up a simulation in a suitable simulation programme
- Simulation of a pump system based on a piston pump and carrying out various tests in the simulation



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**Cooperation partners:** 





