

## Challenge CORROSION TESTING WITH SUPERCRITICAL CO<sub>2</sub>

In regards to low carbon business a major understanding of the corrosion mechanisms and further corrosion management for the transportation of supercritical CO<sub>2</sub> is crucial to operate existing infrastructure and assets safely.

Since the corrosion management concepts will alter compared to the currently prevailing operating conditions it is intended to redesign the laboratory equipment for the accomplishment of tests with supercritical CO<sub>2</sub>.

## Industry Partner



OMV produces and markets oil, gas and chemical product and process solutions in a responsible way. Combining the chemical and mechanical recycling expertise of OMV and Borealis, the group aims to become a leader in the plastics circular economy. Group sales revenues of EUR 17 bn and a workforce of around 25,000 employees in 2020 make OMV one of Austria's largest listed industrial companies.

## Mission

- Investigate the challenges for the execution of autoclave tests under supercritical CO<sub>2</sub> environment
- Define the particular equipment for pressurizing the autoclaves with supercritical CO<sub>2</sub>
- Establish a process guideline to pressurize the equipment with supercritical CO<sub>2</sub>
- Find a way to add impurities into the testing environment (eg. 50 ppm H<sub>2</sub>O)

