

Application

Mechanical material testing such as tensile testing.

Exposure tests to check for low temperature compatibility at 20 K, H₂ compatibility and potential degradation or permeation effects.

Material samples such as magnets, superconductors, and fiberreinforced plastics.

Components such as valves, bearings, and sensors.

Parameters

LH₂-Volume Pressure range Temperature range Cool-down 300 K – 20 K Cooling capacity Expected liquefaction rate Warm-up 20 K – 300 K

2.31 0 – 2.1 MPa 17 – 33 K 5 h 10 W @ 20 K 0.55 l/h < 10 h

Key features

Integrated liquefaction unit Thermo siphon Unlimited experiment time Extensive safety features Compact size

LH₂ Experiment Platform

Maximilian Grabowski, Christoph Haberstroh

TUD Dresden University of Technology, Germany

maximilian.grabowski@tu-dresden.de







