

Production and bunkering plant for hydrogen ferry in Rogaland



NORWEST

Norconsult has developed a concept for production, storage and bunkering of ships with compressed hydrogen. GreenH develops infrastructure for hydrogen and production of hydrogen from hydropower.

Assignment

GreenH wants to establish facilities for production of compressed and liquid hydrogen for bunkering of express boats, ferries and small container ships in Western Norway. The company aims to eventually supply green hydrogen to trains, ferries and heavy transport across the country. Norconsult has carried out a feasibility study for the production, storage and bunkering of ships with hydrogen

Solution

Technical challenges related to production, storage and bunkering of compressed hydrogen, as well as ship interface were evaluated. The study includes solutions related to process

control, dispensers, metering, couplings, flexible hoses and safety assessments. The report comprises process piping, electric systems, safety and automation systems and civil design. Dynamic simulations were applied to optimize the bunkering solution. Technical solutions for the production and storage of liquid hydrogen at minus 253°C are included in the study.

Result

In this assignment, Norconsult developed an innovative and detailed solution for hydrogen bunkering for ferries. The production and bunkering facility is planned to be in operation by late 2021. The project is now entering detail phase.

► Disciplines and services

Hydrogen

Time span
2020