WP6 - Functional Demonstrator

The main objective of this work package is the design and construction of a functional demonstrator. The demonstrator will have a total power of > 60 kWe including batteries and fuel cells; of which 60 kWe will be from fuel cells. The second aim is to connect the developed genset demonstrator to the electrical grid and operate it for 3 months.

6.1 WP Leader

- MAN Energy Solutions (MAN)

6.2 Tasks and Outputs

Process, mechanical and electrical design + component procurement

- Technical requirements, functions and system concept of the demonstrator have been specified. The battery rack system has been dimensioned, while a design screening in close cooperation with LR will evaluate the installation.
- Deliverable D6.2 - Completed drawings, layout and P&ID for the design of demonstrator – pending.

System manufacturing, assembly and software programming

- The manufacturing, assembly and software programming will be carried out by MAN in close cooperation with subcontractors.

Demonstrator site preparation

- For the installation and operation of the fuel cell demonstrator on the yard premises a location has to be prepared with all interfaces.

Installation and operation of demonstrator

- After manufacturing and assembling, the demonstrator will be installed at MW premises.

Fuel cell testing on inclination pod

- Testing of a fuel cell unit 6 kWe on an inclination pod will be implemented by TUD in close cooperation with SP_SPA and LR in order to identify potential influences and effects of the exposure of the fuel cell unit to marine conditions: inclinations, ship motions and vibrations.
- Deliverable D6.1 - Safety report on the tests of fuel cell unit on the inclination pod – pending.

6.3 Duration and Status

- Months 7 - 48
- Status – in progress

6.4 NAUTILUS Follows Ups

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