

Model tests for the world's first deep-water FLNG

MARIN recently carried out a model test campaign on a FLNG that is expected to be the first deep-water FLNG in the world.

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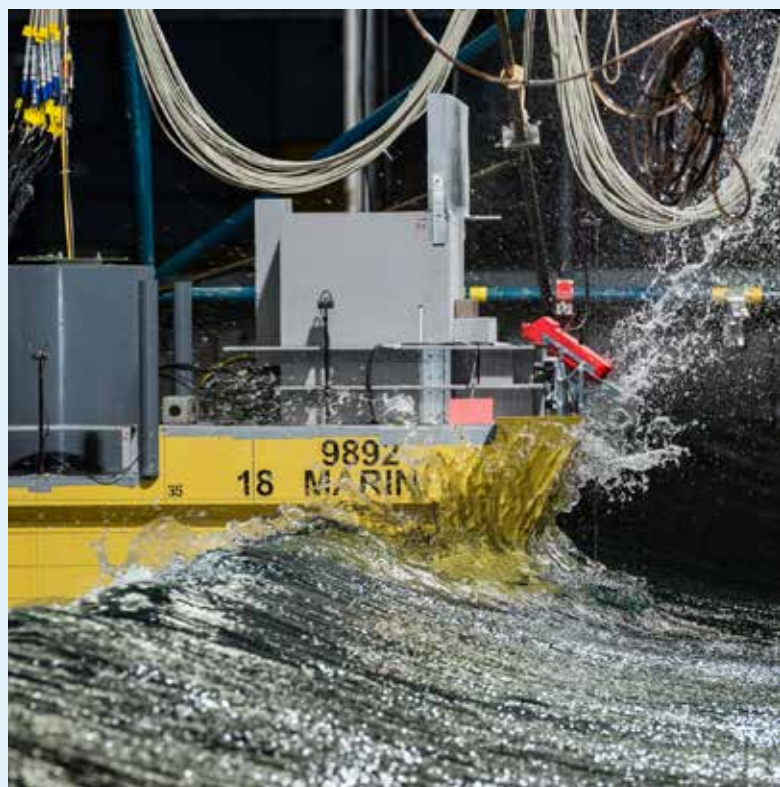
The FLNG will be a permanently turret moored unit. MARIN assisted the client with the design of the FLNG by executing an extensive model test campaign, which comprised four phases. The first three phases consisted of seakeeping, side-by-side and station-keeping model tests and were conducted in the Offshore Basin. The last phase performed towing stability and resistance model tests and was conducted in the Seakeeping and Manoeuvring Basin.

Short time frame A challenging aspect of the project was that many different tests, involving a wide range of instrumentation, experimental setup and even facilities, were to be performed with the same model within a short period of time. The preparation of the model and of the experimental setup were therefore essential to ensure a smooth transition between the different test phases, and to guarantee the best planning for our clients.

To ensure the smooth execution of the model tests in the basin, a great deal of effort was put into the model engineering.

Optimised model MARIN manufactured a model that could be used in a flexible and time efficient way, whatever the type of tests or facility being used. The instrumentation required for

Run-up at the bow during a station keeping test in head-on wave



Seakeeping model test in bow quartering wave

all phases of the project was fitted in the model prior to the start of the basin slot. This was made possible by using our new data acquisition hardware, which is installed inside the model. The number of cables between the model and the carriage is therefore reduced to a minimum, which eases both the transition from one testing phase to the other, and the transportation of the model from one facility to another.

This challenging project was completed in a relatively short period of time for such a large model test campaign. The joint efforts between MARIN and the clients to develop an optimised model and experimental setups provided a solid foundation on which to make the project a success. ▬