Construction RV *Wim Wolff*

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The RV *Wim Wolff* is a new shipbuilding project for the Dutch national research fleet. The fleet is owned and operated by the National Marine Facilities (NMF), a department of the Royal Netherlands Institute for Sea Research (NIOZ). The NMF fleet consists of three vessels capable of conducting research from the shallow coastal waters out into the open ocean.

The RV *Wim Wolff* is intended to replace the Wadden Sea research vessel RV Navicula, and with its shallow draught of 1 meter it is specifically designed for overnight voyages for research in the Wadden Sea, the Zealand delta or the coastal zone.

With a permanent crew of four, the RV *Wim Wolff* will offer state-of-the-art facilities for a maximum of 12 passengers, and is equipped with onboard dry and wet lab facilities. The vessel also has room for two customised lab containers.

The RV *Wim Wolff* will be built by Thecla Bodewes Shipyards in Harlingen, and is scheduled for delivery in late 2022.

Model tests at MARIN

The results of the speed tests conducted for the RV *Wim Wolff* by MARIN are in line with expectations: the installed power in the design is capable of achieving both the desired maximum speed and cruising speed.

It is therefore clear that the current design need not be adjusted.

Model of the RV Wim Wolff before sea handling testing. ©MARIN

The institute is now preparing model tests for sea handling to study the influence of wind on the superstructure and waves on course and drift.

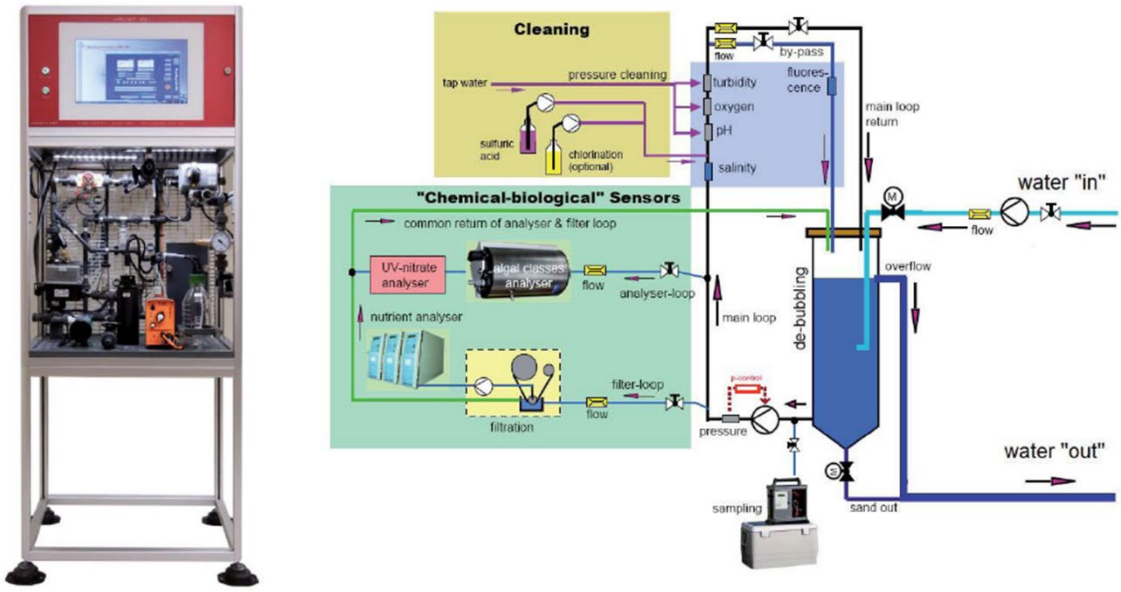
MARIN has built a self-propelled model for this purpose, and has reserved time slots in its basins for early August.

The results of these sea handling tests must be positive before construction can begin on the hull. Shipbuilder Dijkstra plans on beginning construction on the hull in late August.

Everything is running according to schedule at the moment, but there is little margin for unforeseen delays.

Ferry box

One major scientific innovation on board the RV *Wim Wolff* is the installation of a 'ferry box'; an automated system for the continuous measurement, display and storage of various water parameters.



Schematic diagram of the working of the fully automated ferry box.

The system uses several integrated sensors to measure water salinity, temperature, oxygen content, chlorophyl, turbidity, pH and nutrients.

The ferry boxes are increasingly installed aboard research vessels, and offer the flexibility for future expansions.

The main suppliers are the German firms 4H Jena Engineering and SubCtech.

Over the next few weeks, the builder will compare estimates from both companies before deciding on a supplier.

Building preparations

The most important activity this month is the completion of the hull engineering and the interior blueprints. The frame line and building blueprints have been approved by the classification society, and the definitive cross-section blueprints are currently being drawn up. Dijkstra and KB need these cross-section blueprints to begin work on the hull.

Once all of the pipes, wiring and other plumbing have been designed and the interior layout has been approved, the final hull displacement and centre of gravity can be calculated to ensure that the vessel will not exceed a draught of 1 meter.

A similar check will be conducted once the weight of the major hull components, such as the propulsion engines, generators, battery systems, insulation and other elements, is known.

The current displacement calculation is based on estimates, as the exact weight depends on choices that have not yet been made.

For more information, please visit: www.NewResearchFleet.nl

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