Construction RV *Wim Wolff*

Progress report #25: February 2023

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 on the working deck.

The RV *Wim Wolff* will be built by Thecla Bodewes Shipyards (TBSY) in Harlingen, and is scheduled for delivery in the 2nd quarter of 2023.

Finishing work

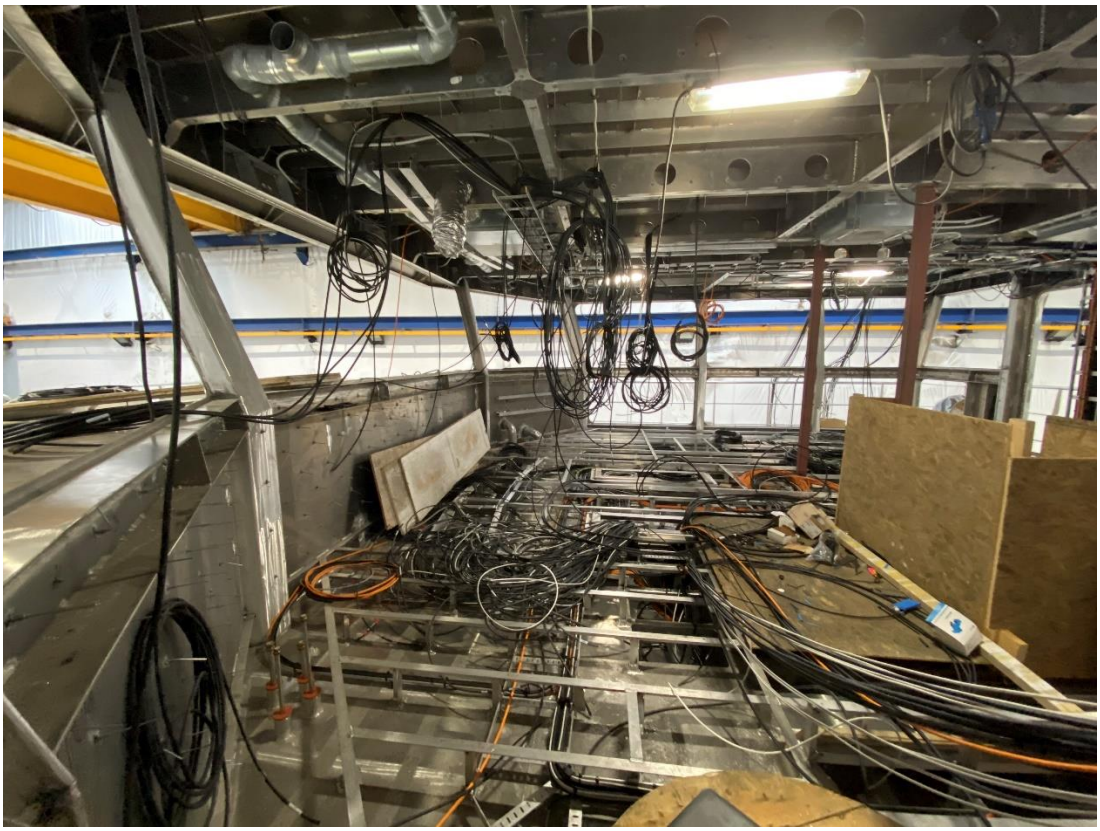
In the final construction facility, builders are hard at work putting the final touches on the RV *Wim Wolff*. Several sub-contractors will be working on the same cabins at the same time during the finishing phase. This will require TBSY to follow a clear and detailed schedule to guide the process within the time available. And with so many different contractors working at the same time, safety is an important issue. Signs posted at the ladderway entrance remind everyone of the rules for working on board.

The hull when it arrived at the TSBY final construction facility. Rubber mats cover the path to the hull to prevent shoes from tracking in dirt. ©FH

The main tasks during this phase include the installation of various pipeline systems and cables, the application of insulation material and the construction of an elevated deck in preparation for the interior work.

Cables

Energy is generated in the engine room. From here, electricity is distributed throughout the vessel. Some of the electrical cables run through a pipe tunnel along the vessel's keel. These include the power cables that supply the bow thrusters.

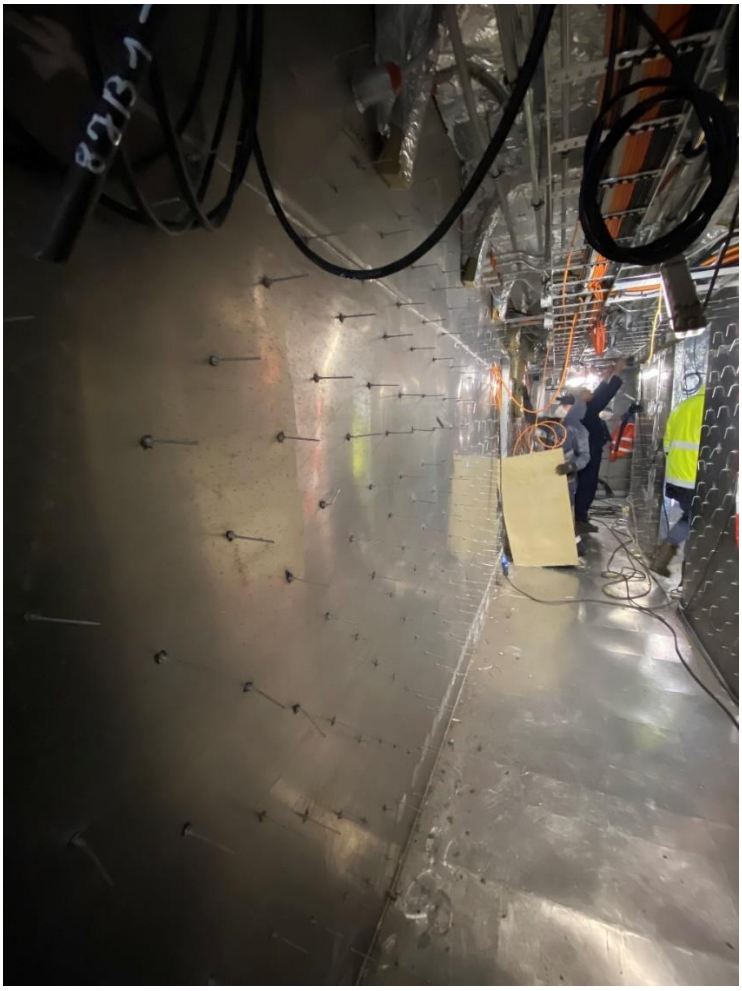


The wheelhouse, showing the many cables and pipes in the cable ducts under the deck and in the overhead.

Most of the control and operating equipment is located in the wheelhouse. This requires a complex interplay of cables in order to connect all of the equipment together. To store the cables, the wheelhouse has an elevated deck to make room for cable ducts full of electrical cables, as well as pipelines and ventilation ducts, to be laid fore and aft in the wheelhouse without obstructing lines of sight. Many cables also run through the overhead compartment, to connect to equipment such as antennas, radar scanners, overhead consoles, etc.

Insulation

Insulation serves four purposes: [1] preventing the loss of heat and energy as much as possible, [2] preventing condensation from forming, [3] protecting against fire hazard, and [4] absorbing noise.



Fastening pins are fixed to every bulkhead at regular intervals to attach the insulation material.

An insulated bulkhead, showing the aluminium cover film and connecting nubs.

To attach the insulation to the bulkheads, pins are first installed on the bulkheads at regular intervals. Two layers of insulation are then applied to these pins, then covered with a layer of aluminium film, tarpaulin or aluminium panels depending on the position aboard the vessel. Nubs are then attached to the pins to hold down the insulation layers.

Elevated deck

To provide noise insulation, the cabins for the crew and passengers are all constructed with an elevated deck. Under the deck is a layer of compressed rock wool insulation across the entire surface, excluding the engine room. A thin sheet of steel is then installed over the insulation, and a sheet of perforated aluminium is attached to the steel using adhesive. This is necessary to create a stable floor to which the cabin bulkheads can be attached.

The elevated deck below decks. ©FH

Now that the deck has been installed, the interior builder can begin installing the cabins.

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