

## Construction RV *Wim Wolff*



### Progress report #21: October 2022

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.

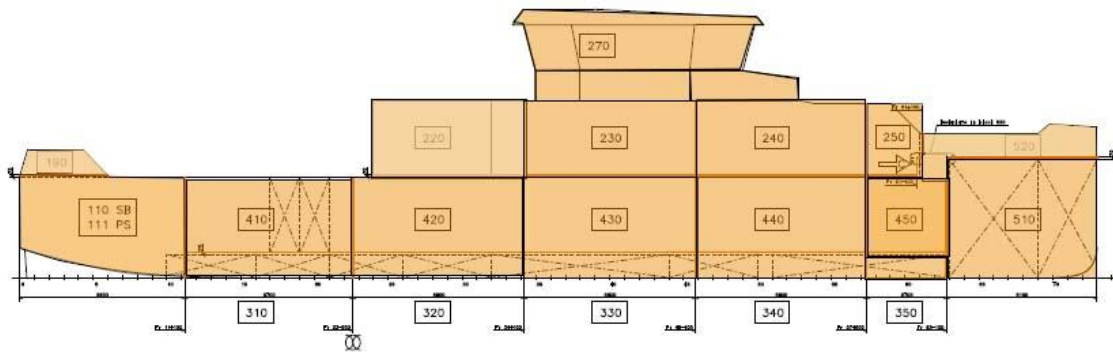
The RV *Wim Wolff* is intended to replace the Wadden Sea research vessel RV *Navicula*, and with its shallow draught of 1 meter it is specifically designed for overnight voyages for research in the Wadden Sea, the Zeeland delta or the coastal zone.

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.

## Hull construction

The hull of the RV *Wim Wolff* is composed of several sections, which are being built at different locations by three Frisian shipbuilders. The individual sections will then be joined together by N. Dijkstra in Harlingen.



*State of affairs in late October. The RV Wim Wolff's hull sections, with the completed and assembled sections shown in orange. ©FH*

All of the sections have now been joined to the hull. The bulwark (section 520) has been welded to the forecastle, and the casing for the HVAC-unit (heating/cooling) has been installed forward of the wheel house. The rear sections 110/111 will not be added to the hull as a unit, but rather build on the hull itself. These sections require extra time and attention because the bushings for rudders and drive shafts must be installed with a high degree of precision.

With the construction of sections 110/111, the hull is becoming too large to fit inside the production hall. Over the next few weeks, the hull will be moved forward to make room for the construction of sections 110/111 on the aft deck. The forecastle (section 510) will therefore extend outside the production hall.

All of the piping systems are currently being installed in the hull.

The hull is scheduled to be transported to TBSY in Harlingen for de further construction in December 2022.



*The bow nears completion, and the hull will soon be moved outside the hall. The anchor port and the bow thruster are visible.*



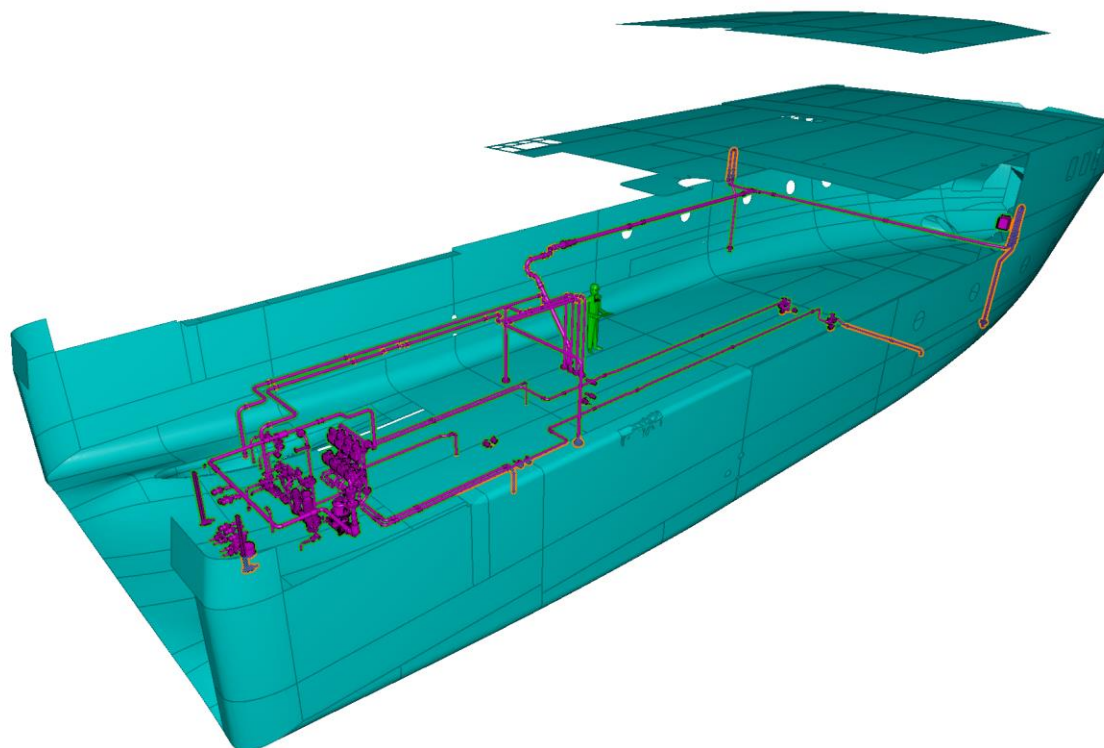
*The letters of the vessel's name have been welded to the hull. ©FH*



## Connecting and integrating the components

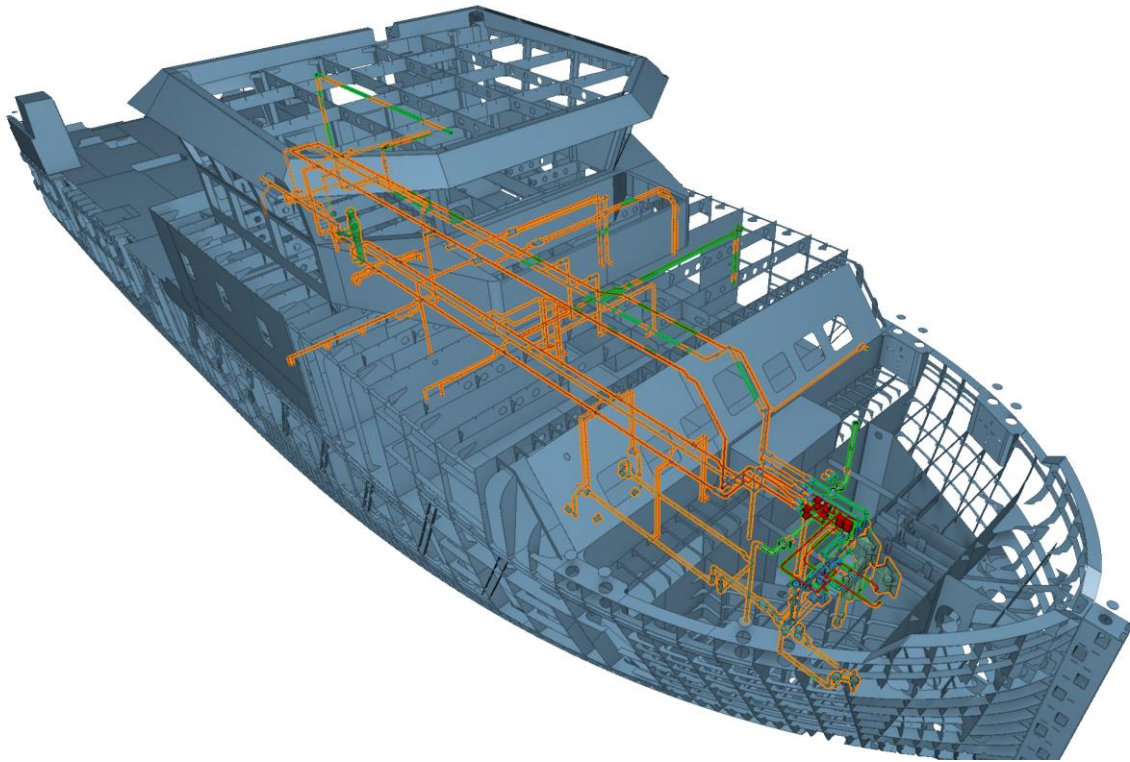
One of the system groups aboard the RV *Wim Wolff* is the fluid systems, which include the fuel system, the drinking water system and the heating system.

The fuel system starts on the work deck with the connections for refuelling. From the work deck, fuel lines branch out to the various fuel tanks, and from there to the engines and boiler. The main lines measure approximately 165 meters, and the total length of pipe is 225 meters.



*The fuel system ©TBSY*

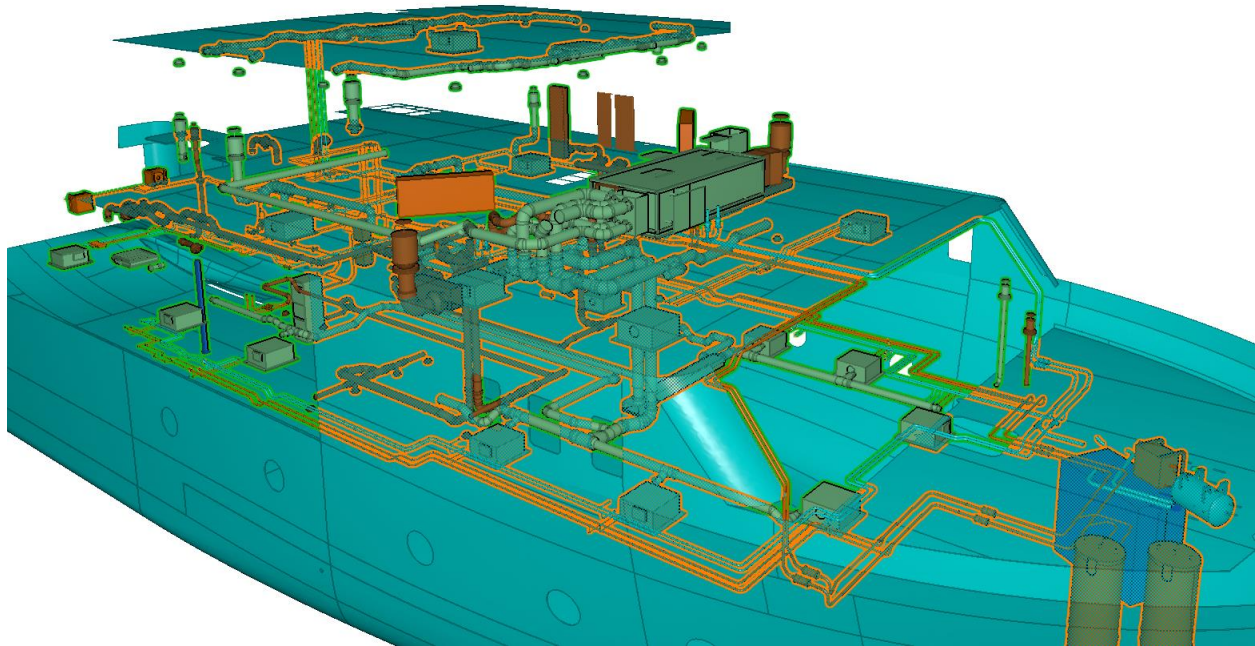
The drinking water system starts on the work deck with the connections for loading water. From the work deck, lines run to the various drinking water tanks forward, and from there a dense network of pipes bring drinking water to almost every compartment. These lines mainly run along the compartment overheads. The total length of pipe is 250 meters.



*The drinking water system ©TBSY*

HVAC stands for heating (H), ventilation (V) and air conditioning (AC). The HVAC installation regulates the climate aboard. The heating system (H) includes a central heating system and a heater in the engine room, and from there a network of pipes and radiators bring heat to every deck. The heating system pipes measure approximately 300 meters.

The ventilation (V) and air conditioning (AC) systems consist of several fans, piping systems and heat exchangers to heat or cool the air before it enters the cabin and other parts of the vessel. This massive system is housed in a structure forward of the wheelhouse, with lines running to every compartment aboard the vessel. This system's pipes also run for several hundred meters.



*The HVAC system ©TBSY*

The puzzle for the builders is to integrate these systems within the hull, while making minimal use of the limited space aboard and keeping the weight as low as possible.

The most important pipes will run through the pipe tunnel running from bow to stern along the keel line. The work must also take the location of the various non-fluid systems into consideration, such as the electrical and information systems.

For more information, please visit: [www.NewResearchFleet.nl](http://www.NewResearchFleet.nl)