

Construction RV *Wim Wolff*



Progress report #1: February 2021

The RV *Wim Wolff* is a new construction project of the Dutch national research fleet. This fleet is managed 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 ships that support research in all kinds of waters, from shallow coastal waters to the open ocean.

The RV *Wim Wolff* is the intended replacement of the current Wadden Sea vessel RV *Navicula* and, with its small draft of 1 metre, it is specifically designed for research trips of several days in the Wadden Sea, Zeeland delta and coastal areas.

The RV *Wim Wolff*, with a crew of 4 people, offers state-of-the-art facilities to 12 passengers and is equipped with its own wet and dry lab facilities. In addition, there is deck space for two specific lab containers.

The RV *Wim Wolff* will be constructed by Thecla Bodewes Shipyards (TB Shipyards) in Harlingen and delivered at the end of 2022.



Signing of the construction contract for the RV Wim Wolff by Thecla Bodewes of TB Shipyards (second from left) in the presence of Henk Brinkhuis, director NIOZ (second from right), Marcel van der Linden (project manager NIOZ, left) and Alex Cofino (head NMF, right).

Thecla Bodewes Shipyards

The RV Wim Wolff will be constructed by TB Shipyards, which carries out both construction and repairs and is active at several locations: Meppel, Kampen, Harlingen and Stroobos. Each location has its own unique specialisation. Large and seaworthy vessels are built in Harlingen, Kampen and Stroobos. Since January 2018, the shipyards in Hasselt and Meppel have been merged under the name TB Shiprepair in Meppel, which is specialised in repairs, extension and maintenance of ships.





A shipyard can build a ship as much as possible under its own management and/or outsource a number of components. For the RV Wim Wolff, TB Shipyards has decided to outsource the construction of the aluminium hull and to do the rest of the internal fitting out at the shipyard in Harlingen. For more information see: <https://tbshipyards.com/>.

The preliminary phase

The starting point was the “wish list of requirements” from NIOZ in which the critical aspects were: draught (maximum 1 metre), number of passengers (12), operational area and scientific deployability. In collaboration with Conoship these requirements were translated into a basic design: an aluminium ship of 36 m by 9 m with a maximum draft of 1 m.

This basic design was tendered in the market, and after negotiations with several shipyards, it led to a final design drawing in which the dimensions of the ship were adjusted to 36.9 m by 10 m with a maximum draft of 1 m. After comparing several tenders, TB Shipyards was finally selected for the construction of the RV Wim Wolff.

The construction process

The construction will take 24 months from the signing of the contract and consists of several phases: :

1. From design drawing to final design

In the coming period, the design drawing will be precisely recalculated by the shipyard, especially with respect to total weight, positioning of various tanks and then integrating all of this into a final design.

A scale model of the final design will also be tested at MARIN in Wageningen, especially with respect to speed, behaviour and windage under extreme conditions.

Usually, after just a few small modifications, this leads to the approval of the final design.

The period February to June 2021 has been reserved for this.

2022 has been reserved for the fitting out.



2. Construction of the hull

After the final design has been agreed, then the construction of the aluminium hull can start. All of the aluminium will be cut and bent with a computer-guided system at the supplier and delivered as a construction package to the shipyard. The hull of the RV Wim Wolff will be constructed in a covered area by a specialised aluminium builder (Dijkstra in Harlingen).

The construction of the hull will take about 12 months.

3. Fitting out of the hull

The next phase is the internal fitting out of the hull at TB Shipyards in Harlingen: placing of engines and finishing the engine room, building the labs, huts, galley, wheelhouse and day accommodations, and fitting the associated parts and electronics.

The second half of 2022 has been reserved for the fitting out.

4. Commissioning

After a successful period of commissioning and trial runs, the ship can be handed over to NIOZ.

Everything depends on a good plan by the shipyard. Many components and the required efforts of subcontractors must be agreed upon well in advance. Examples of this are outsourcing the hull, purchasing aluminium, producing the cutting package, and purchasing the engines, galley equipment, electronics, and other inventory.

NIOZ has a say in the choice of components and subcontractors. A construction meeting will be held with TB Shipyards every one to two weeks to prevent bottlenecks and to resolve these quickly should they nevertheless occur.

NIOZ has also hired Feico Hoogeveen (NAVIS, Harlingen) to supervise the building of the RV Wim Wolff and RV Adriaen Coenen. NAVIS is specialised in supervising the construction of new ships.

More information can be found at www.NewResearchFleet.nl

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