

Construction RV *Wim Wolff*



Progress report #3: April 2021

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 will also have 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

Project management

To ensure good communications and the smooth construction of the RV *Wim Wolff*, a project management team has been created with representatives from the client and the shipyard. This team will meet every two weeks, with additional technical meetings as necessary.



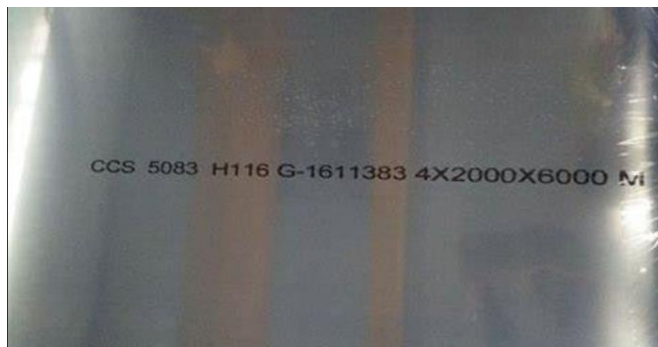
The project management team for the RV Wim Wolff, with Priscilla van Amerongen (left rear) and Simone Luijendijk (right rear) representing TBS and Alex Cofino (left front) and Feico Hoogeveen (right front) representing NIOZ.

Wim Wolff has resulted in a construction process that saves as much weight as possible, without sacrificing functionality. Most of the vessel's displacement of 65 tonnes lies in the weight of the hull and superstructure. Using aluminium in the construction will result in a 60% weight reduction over the use of steel.

Aluminium is also greener and more sustainable than steel, as it can be recycled without loss of quality. An estimated 75% of all aluminium ever produced is still in use/ even 'new' aluminium may contain up to 50% recycled metal. Aluminium also requires lower maintenance costs for oceangoing vessels, as it is less prone to corrosion than steel and does not need to be painted.

The construction will not use pure aluminium, however, the vessel will be made from an aluminium alloy with small amounts of other metals. Specific alloys are available for certain industrial applications. The hull and superstructure of the FJ Wim Wolff will use seawater-resistant marine grade aluminium 5083/ a hard 50 (50% AgO). An alloy that is known for its corrosion-proof characteristics.

To guarantee delivery of the right type of aluminium with the desired quality, the manufacturer stamps each aluminium product with a label indicating the production process. This allows the user to trace the origin and composition of the aluminium. Quality control is guaranteed by an independent inspection agency which issues a Hoge 3.1 inspection certificate.

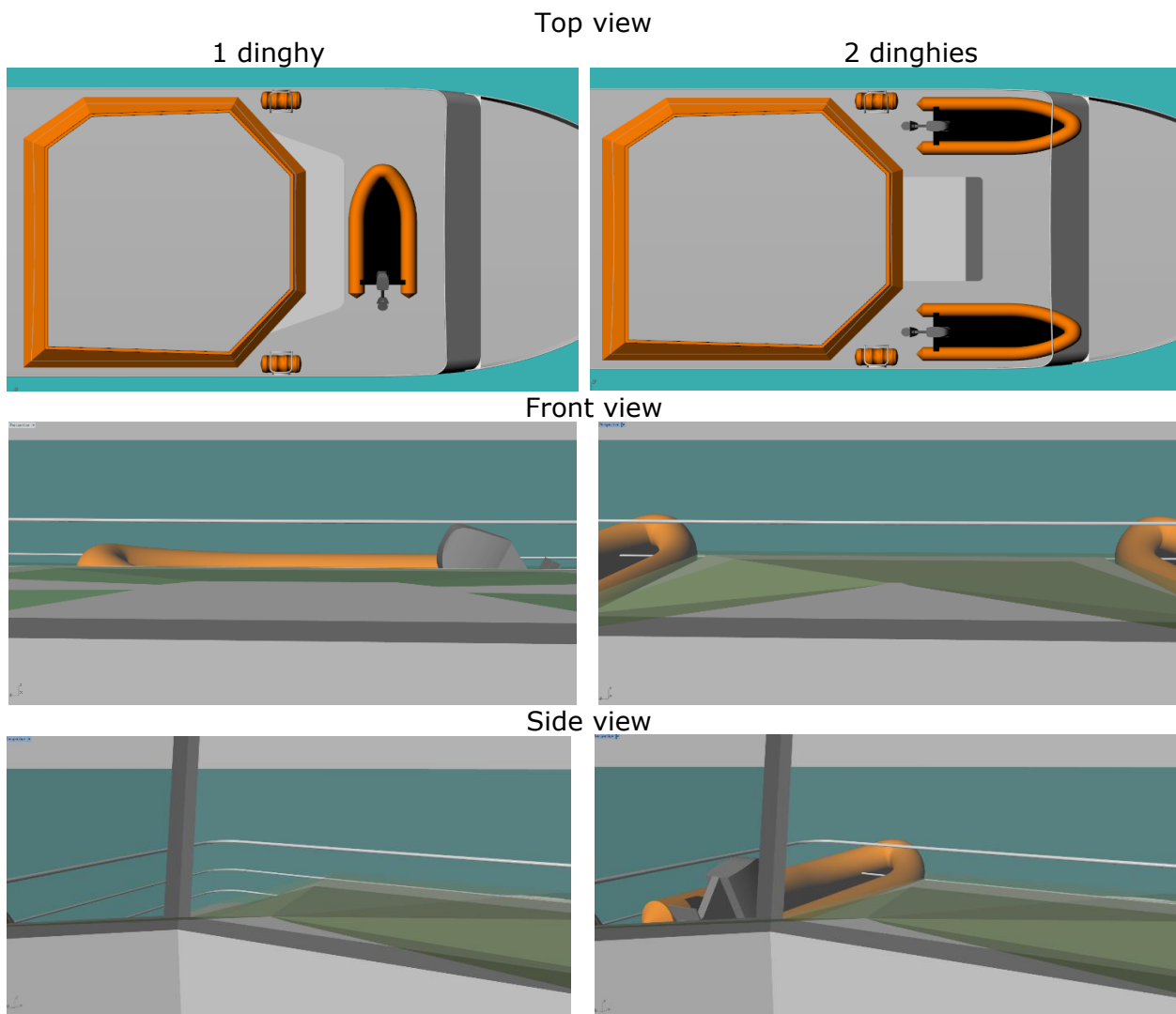


Sample of the production process stamp for marine grade aluminium (5083), which can be used to trace the product's origin. H116 refers to the aluminium's hardness.

Although there is an aluminium producer in Belfini, The Netherlands, most of the aluminium will be produced elsewhere. There are several wholesalers that import and sell aluminium in the Netherlands, and the stamp and inspection certificate guarantee the quality of the product.

Progress in April

The focus so far has been on optimising the hull shape and the contract tender for the aluminium hull. This optimisation work also involves a check of the eventual lines of sight around the bridge. The illustration below shows the effects of two different options for the placement of 1 (left column) or 2 (right column) dinghies onboard, with top views and the lines of sight to the front and sides.



©Thecla Bodewes Group



The finalised hull design and lines plan has been submitted to the classification society Bureau Veritas for approval. A model of the definitive design is currently being built to for use in model tests and tow tests at MARIN. Once the hull has been approved by Bureau Veritas, the shipyard can begin construction on the hull.

Schedule for May

The definitive contract tender for the aluminium hull at Dijkstra in Harlingen is scheduled for May, and the builder will begin purchasing items with longer delivery times, such as the motors.

More information can be found on: www.NewResearchFleet.nl

Henk W. van der Veer
Alex Cofino

@ResearchFleetNL

