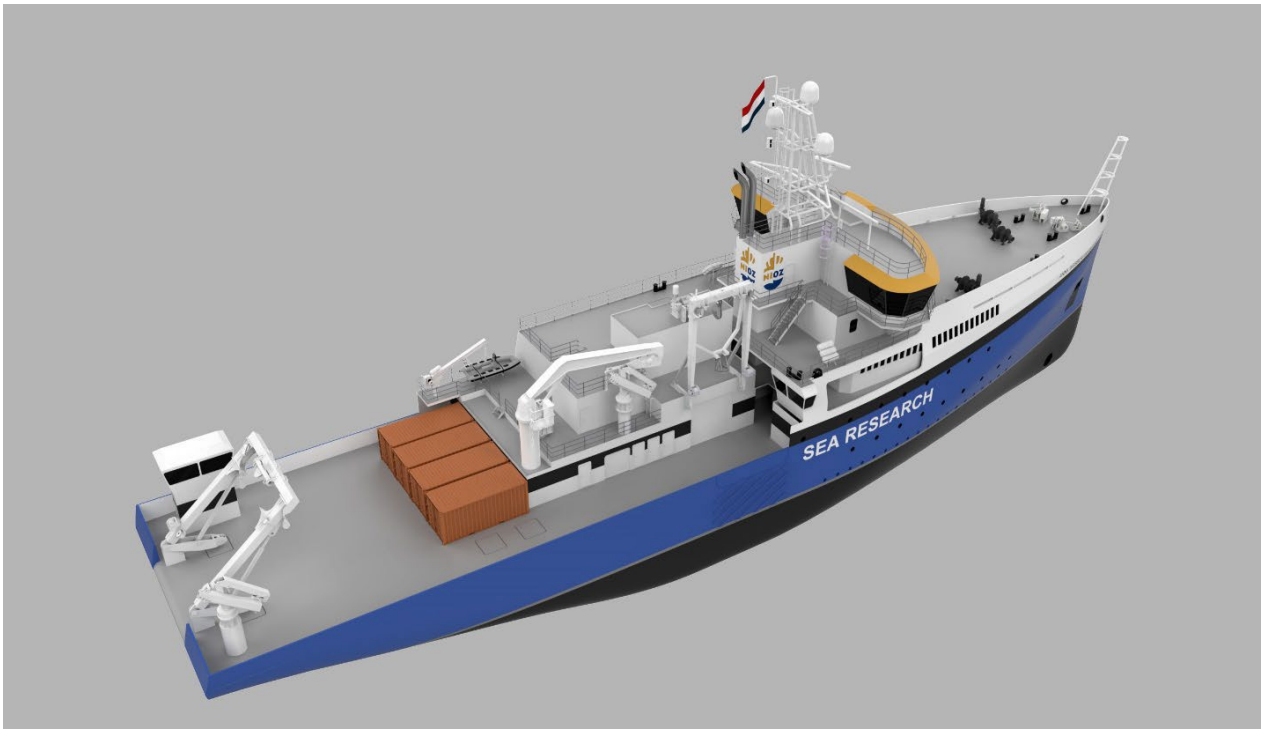
New build RV Anna Weber-van Bosse



Progress report #4: June 2023

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INTRODUCTION

When it is complete, the RV Anna Weber-van Bosse will serve as the ocean-going research vessel for the Netherlands' 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.

As we explained in last month's progress report, each month we will explain part of the vessel's technical components until construction actually begins on the vessel. Last month, we provided a brief summary of the acoustic equipment that will be installed in the central gondola in the drop keel. This month, we will give a short explanation of the various laboratories that will be built in the new vessel.

Four different laboratories will be created on board, each with its own layout suitable for the scientific research conducted in the lab. The NIOZ has paid considerable attention to the laboratory needs during the design phase. The goal is to keep the spaces as flexible as possible through the optimal use of the limited space available.

Wet lab

The wet lab will be located to the aft of the CTD cabin. This space is intended for the immediate processing of water samples from the CTD, via the Aquaflow system or the plankton net. The cabin is therefore connected to the CTD cabin, with portholes to allow for visual observation of the CTD sampling. This space will be furnished to filter sea water and to process and analyse samples. The online sea water analysis equipment (Ferry box) will also be located in this lab, which will have setups for rinsing with sea water. To that end, the lab will be furnished with several work tables, rinse basins, a sediment capture facility, and a fume hood. The lab will be accessible directly from the CTD cabin to keep the distance that the samples must travel as short as possible.

Dry lab

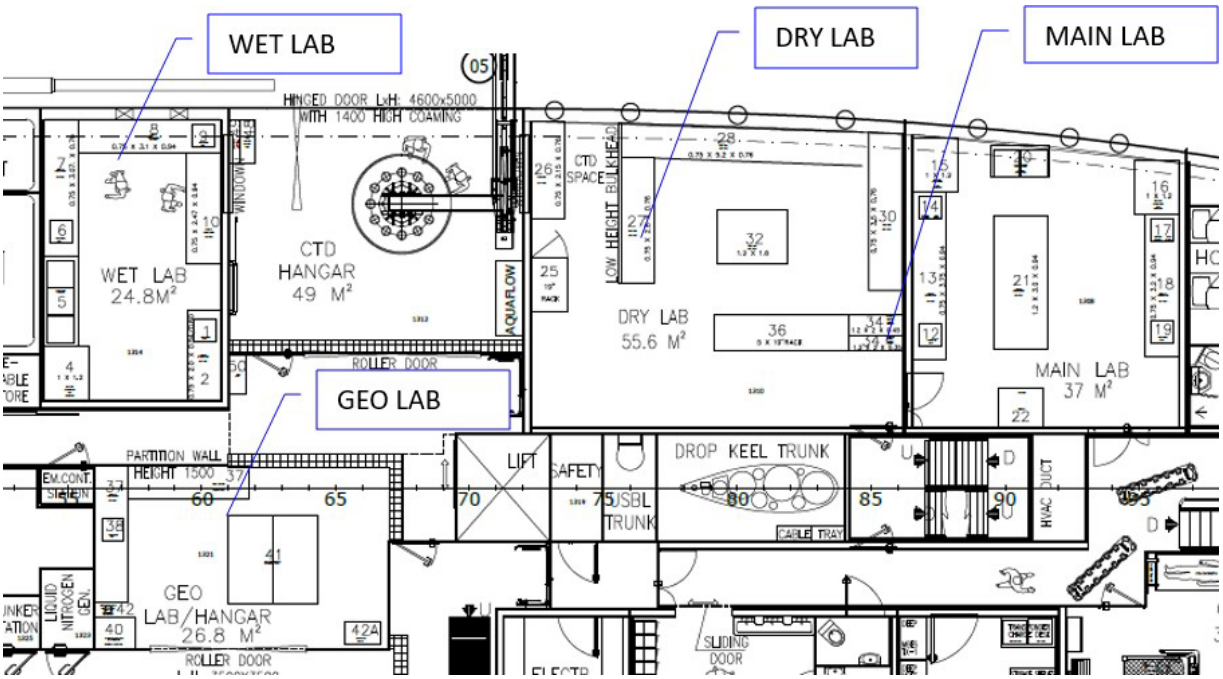
The dry lab will be located forward of the CTD cabin. The dry lab is a dry multi-purpose space with the equipment for the CTD, video and mapping acquisition. It will also house work stations, and part of the space can be used as a lab space for expedition-specific activities, such as microscopy or fly cytometry. This will be the hot spot where the data from the onboard sensors are sent for processing and sample analysis. The lab will also house work stations for the acoustic instruments, as well as a video wall for viewing the data provided by the various sensors. In addition to the work tables and storage cabinets, the lab will also be equipped with 19" racks for the onboard sensor equipment.

Main lab

The main lab will be located forward of the dry lab. This lab will be suitable for working with wet chemicals, so it will be equipped with fume hoods as well. Work with chemicals may involve experiments, sample analysis (fauna, sediment, filtration) and experiment preparation. To that end, the lab will be furnished with several work tables, rinse basins, a chemicals cabinet, and a fume hood.

GEO lab / Hangar

The GEO lab will be located between the CTD hangar and the starboard A-frame. The GEO lab will have a large sliding door to allow the A-frame to hoist taller setups and/or equipment in front of the lab entrance. This lab is also a wet lab space for processing sediment samples, trawls, sub-sampling, photography and the storage and maintenance of large equipment, such as the landers, the ROV, gliders and AUV. Some of the work conducted here will include sampling and sample processing, programming instruments, and maintenance on the landers and equipment used in combination with the ROV.



A LOOK BACK OVER THE PAST MONTH

The shipyard engineering work is on schedule, and several blueprints have been submitted to the NIOZ for approval over the past month. The yard has made a special effort to catch up on the mechanical engineering schematics. The last visit to the shipyard cleared up the remaining issues regarding the operation of the systems, so several of the blueprints have been agreed upon and submitted to the NIOZ for approval. The shipyard has also submitted all of the construction schedules, most of which have been approved by the NIOZ. The next step is the classification society inspection. The yard and suppliers have held several meetings to discuss the proposed methanol upgrade. This is a long and complicated process, due to the lack of experience in this area at the shipyard and the inspection agencies. Very few vessels are powered by methanol at the moment, which presents some new challenges. The potential implementation of methanol will undoubtedly present some unforeseen issues that will have to be studied in detail. The shipyard has begun submitting basic layout blueprints to the NIOZ for approval, so that the stakeholders can determine if the spaces on board are large enough to hold the necessary components. The yard has also sent specifications to several suppliers over the past month. NIOZ is now in possession of the plans for the complete propulsion system.

PROGRESS

The progress at the shipyard is currently running according to the schedule agreed upon when the contract was signed. There are still a few blueprints that need to be submitted for approval, and the shipyard needs to pay more attention to this issue. But there is every reason to expect the yard to catch up over the next month. The impact of a potential methanol upgrade is becoming clearer over time. The shipyard has provided a financial estimate and an indication of the impact on the delivery time if the NIOZ decides to go ahead with the requested methanol upgrade. The shipyard seems to have caught up with the engineering process regarding the technical supplier specifications. In general, the yard is focusing on providing the agreed-upon documents to complete the basic design and meet the milestone targets.

SCHEDULE FOR THE MONTH AHEAD

The yard will continue to work on the basic design and purchasing for the project. The stakeholders will take a critical look at the potential methanol upgrade and its impact on the design. The regular engineering meeting in mid-July also included a visit to the Tom Crean. The shipyard delivered this research vessel last year, and NIOZ representatives visited it during the construction phase. Now the NIOZ had an opportunity to see the completed vessel to get an idea of the technical facilities and the shipyard's construction method. The vessel was built for a different type of research than the Anna Weber-van Bosse, however. The evaluation of the MARIN reports is also scheduled for this month, to see if all of the technical specifications for sea handling and drag have been met.

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