



RSV Nuyina arriving in Vlissingen to prepare for final commissioning in late 2020

Image: Damen

Global pandemic leads to innovative solutions for Australia's new icebreaker

How do you respond when you're in charge of delivering one of the world's most advanced icebreaker vessels in the middle of a global pandemic? This is the challenge Serco RSV *Nuyina* project director, David Astbury, has faced this year, with international travel restrictions from COVID-19 requiring innovative thinking to keep Australia's new icebreaker moving forward.

One of the most advanced vessels of its kind in the world, the RSV *Nuyina* is a scientific research platform, icebreaker and resupply ship in one. At 160.3 metres long and 25,500 tonnes, the vessel will be powerful enough to break 1.65 metres of ice at a continuous speed of three knots, quiet enough to allow researchers to use acoustic instruments, and large enough to resupply two of Australia's four Antarctic and sub-Antarctic stations in one voyage. A \$1.91 billion investment by the Australian Government, the *Nuyina* is the centrepiece of the Australian Antarctic Strategy and 20 Year Action Plan.

Serco Australia has led the design and build of the vessel for the Australian Antarctic Division since 2016, and will operate and maintain the ship when it arrives in its home port of Hobart in 2021.

A complex project in its own right, the build was nearing completion before COVID-19 restrictions halted final commissioning activities in the Damen shipyard in Romania earlier this year.

"The internal fit-out of the *Nuyina* was complete, and we had just turned the starboard propeller for the first time before lockdown hit," Astbury explains.

"Safety was our top priority. The build programme was paused, and we had to start thinking about alternative strategies to mitigate the impact of what was shaping up to be an unprecedented pandemic."

When construction safely recommenced, the biggest challenge faced by the project team was access to the shipyard for the Australian Antarctic Division and key project representatives responsible for overseeing Harbour Acceptance Trials.

"Thankfully, we had an expert team on the ground, led by our Construction and Commissioning manager, who has overseen complex build projects around the world."

Serco introduced a process to enable the local shipbuilding team to transmit live data between Romania and Australia to allow the analysis of test data by project representatives and technical experts, remotely.

In June, the team undertook remote testing of the incline experiment, a vital test to measure the weight and centre of gravity of the ship. The trial saw shipbuilders on the ground conducting the testing activities, while Serco and the Australian Antarctic Division monitored the physical trials using video conferencing technology, survey data and still and video images taken throughout the testing period.

Over six days, hundreds of messages were exchanged across continents, while the on-site team worked meticulously to prepare the vessel and conduct the



A friend in the business. Hamburg Süd.

In business, it helps to have a friend you can turn to for good advice and strong support. Someone who knows your needs and takes the personal care needed to meet them, always working in your best interests. Product excellence and service reliability are indispensable, but what creates that kind of commitment is a spirit of cooperation, continuity, and trust – in other words, friendship. And that's the ship you can count on to carry everything forward.



No matter what.

HAMBURG  SÜD

www.hamburgsud-line.com

testing. It is believed to be the first use of remote monitoring technology for such trial activities in the world.

The remote trial proved successful, but the project still faced uncertainty about when the original equipment manufacturers, based in Western European countries, would be able to access the shipyard to test the *Nuyina*'s propulsion, electrical and navigation systems. These critical tests mark the final stage of harbour testing before sea trials.

Faced with the possibility of months of further travel restrictions to Romania, the project team made the decision to tow the vessel to the Netherlands to enable work to progress.

Prior to departure, 409 internal compartments underwent final inspection, and 680 kilometres of cable were laid throughout the ship.

On 3 August, the Italian-registered tug *Eraclea* departed Galati for a 6,800 kilometre journey, travelling through the Black Sea, the Mediterranean Sea and the Strait of Gibraltar, before reaching the port of Vlissingen in the Netherlands in late August.

The move to the Netherlands marked a significant step forward in the project and will enable final commissioning to be completed by the end of the year.

Astbury said the challenges of working on a complex build in the COVID-19 era required an innovative and agile approach.

"While the pandemic has delivered unprecedented challenges to the project, the team has worked in consultation with our customer the Australian Antarctic Division and shipbuilder Damen, to ensure final commissioning work can continue on the vessel in the Netherlands safely and effectively.

"This move will ultimately ensure the *Nuyina* is ready for service next year."

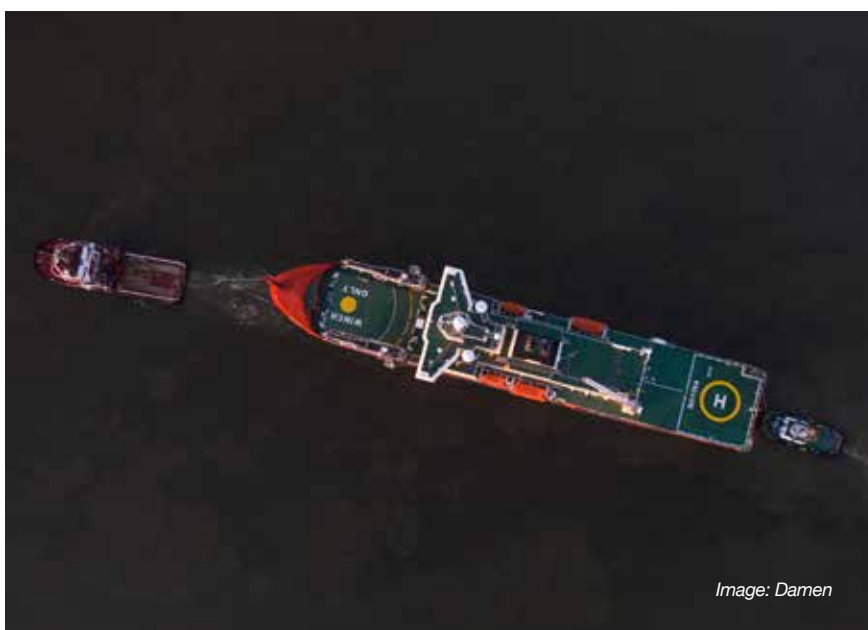
Sea trials are expected to commence in the North Sea in late 2020, with ice trials taking place off the coast of Norway in early 2021.

Despite the challenges of the project, Astbury said there was excitement building for the arrival of the vessel in Hobart.

"The *Nuyina* is a state-of-the-art vessel that will deliver unprecedented capability to the Australian Antarctic Program. When she undertakes her maiden voyage to Antarctica in the 2021/22 Antarctic season, she will be the most advanced scientific research and supply vessel in the Southern Ocean.

"The *Nuyina* truly is a ship of the future."

For more information,
visit www.serco.com/icebreaker ▲





Caring for our Clients and their Cargo

When you combine Newcastle's hugely diverse range of facilities with our levels of service, competence and experience, we believe you will find a genuinely competitive option for all your imports and exports through the Eastern Sea Board.

130 Young Street, Carrington NSW 2294 | PO BOX 190, CARRINGTON NSW 2294
Ph Main: +61 2 4978 7100 | Mobile: +61 412 680 001 | Email: geoff@newcastlestevedores.com.au



Over 1400 Ports
Covering 31 Countries
More than 100 Offices Worldwide
Shipping to & from Melbourne, Brisbane
Sydney, Fremantle & Adelaide

**LINKING AUSTRALIA
TO THE WORLD AND
THE WORLD TO
AUSTRALIA**

INTRODUCING AIRSHIP A NEW DIMENSION TO OUR SERVICES OFFERING DYNAMIC INTERNATIONAL SOLUTIONS

When seafreight is too slow & airfreight too expensive.
Airship is the key to your continued business success.

Simplified Tariff
Door-to-port service
Substantially reduced transit times
Priority transfer from plane to vessel
Prompt vessel connection in Singapore



THE 2019 DCN AUSTRALIAN
**Shipping &
Maritime**
INDUSTRY AWARDS
HIGHLY COMMENDED

Contact us for your most competitive rates & service

WWW.GLOBELINK.COM.AU