



DRY EXHAUST SYSTEM

BACKGROUND

The 16,000 tonne vessel is capable of carrying over 300 troops, 23 Abrams tanks, 150 light trucks, LCVP, Landing Craft Mechanised (LCM8) and can also operate Navy helicopters.

NDT Australia Project Solutions has been the principal systems integrator for the HMAS Choules Capability Assurance Project (CAP) since 2019. The project involves the design and installation of over 80 engineering changes across 44 capability enhancement areas to assure the capability and support of HMAS Choules until her planned withdrawal date early next decade.

THE CHALLENGE

The CAP has been delivered progressively through several maintenance periods but a mid-life upgrade for the platform was required. As part of the upgrade, HMAS Choules was to be fitted with a new Dry Exhaust system. The exhaust was designed by UK based engineering company Darchem, a specialist in exhaust systems with vast design build and installation experience.

Working closely with A&P Group in the UK, Darchem had completed the installation of the exhaust systems for RFA Cardigan Bay, RFA Lyme Bay and RFA Mounts Bay on behalf of MoD/RFA in the UK. A&P Australia selected Darchem as the original equipment manufacturer (OEM) of the Bay Class Dry Exhaust.

But while A&P Group's Australian arm - A&P Australia - was able to draw on Darchem's experience and knowledge to oversee the installation of the new Dry Exhaust system on HMAS Choules, it also wanted to deploy an Australian-based company to manufacture the exhausts to maximise Australian content and grow sovereign capability. This approach would ensure the Royal Australian Navy received the best level of assurance for the design and installation of the new system, whilst also optimising Australian Sovereign Capability as part of HMAS Choules' refit.





THE SOLUTION

As a specialist engineering governance and project management company, NDT Australia was hired by Darchem to help bridge the gap between the UK and Australian operations.

Utilising its robust supply chain and in-house engineering capacity, as well as its much-vaunted digital project management delivery model, NDT Australia Project Solutions harnessed its 'in country' project engineers to support the selection from six Australian engineering companies, before selecting Sydney-based Chess Engineering to produce the new Dry Exhaust system.

Darchem manufactured and supplied the exhaust silencers and bellows units from the UK with NDT Australia and Chess Engineering to manufacture the remaining of the exhaust system in Australia which also included the exhaust protection cages, support frames and secondary steelwork in both carbon and stainless steel.

NDT Australia and Chess Engineering completed the project ahead of time, despite the restrictions of the pandemic.

Darchem also engaged with NDT Australia to complete the full installation works, which required qualifying the welders to Lloyds approved specifications and installing the systems to the quality and standards required. Utilising a team of eight people from support engineers, skilled trades, and trade assistants, this has now developed the AIC skills not only for the HMAS Choules project, but also any future work for A&P Australia where they need this specialist resources.

CASE STUDY

