

# Australian Marine Technologies



## MV DELOS Conversion - Design for HMAS Sirius

SEA 1654 — Phase 2A replaced HMAS WESTRALIA with a commercial product tanker modified to conduct underway liquid replenishment. AMT provided the design for the full conversion of the 37,000 tonne deadweight double hull tanker to become HMAS Sirius. This Project is widely recognised as one of Defence's great successes.

AMT was contracted by the Prime Contractor Tenix Marine to provide the principal, detail and production design for the conversion, which includes a full Replenishment at Sea CONREP facility, a limited aviation capability and significant platform system, accommodation and outfit changes to meet the operational, performance and availability requirements specified in the Navy's Mission System Specification and the LR Classification requirements.



The bulk of activity was configured under seven (7) Technical Data Packs (TDP), as:

- Platform - changes to overall ship system including tank configurations, electrical system, sewage treatment system and other ship distributed support systems as well as overall strength and stability considerations.
- Containers - the addition of a new section of deck at A deck level to provide storage space and support facilities including power for up to 12 ISO Containers and new RHIBs.
- Aviation - the addition of a new flight deck aft to provide the required level of aviation capability. The flight deck was in the form of a cantilevered structure and was the first such structure designed to Lloyd's Naval Rules.



- Accommodation - substantial changes to the superstructure to accommodate a significantly increased complement and as well as providing the required RAN operational spaces and damage control facilities.
- C4ISREW/DSE/ECDIS - the addition of significant communications and electronic equipment (including NDS) to support the naval operational capabilities required in a new naval vessel which also required the design to meet naval physical and TEMPEST (EMSEC) requirements.
- RAS - the integration of a Rexroth Hydradyne RAS System to provide the vessel with underway liquids replenishment (supply and receive) capability commensurate with the role of a fleet tanker.
- Boats (incl. Lifeboats) - the addition of the RHIBs and davits from HMAS Westralia as well as the installation of larger enclosed SOLAS lifeboats to support the larger crew numbers. HMAS Sirius, replacing HMAS Westralia, entered RAN service ahead of schedule in the second half of 2006. Australian Marine Technologies and the Commonwealth's Project Office were separately and individually awarded by the Institution of Engineers



Australia for Engineering Excellence in a project that is widely recognised as one of Defence's great successes.