

Appendix 3: User Requirement

Defence's evaluation and subsequent purchase of *Mercandian Queen II* was based on the document 'MILITARY SEALIFT SHIP (MSS): USER REQUIREMENT Version as at 6 Dec 92', which is summarised below.

Primary Purpose

The fundamental requirement is for ship to be able to transport a range of Ready Reaction Force stores, vehicles and equipment, plus up to 150 troops, and autonomously unload alongside an unimproved wharf.

General Requirements

Roll on/roll off type vessel, of not less than 5000 DWT, with a quarter or stern slewing ramp:

- To be maintained in Lloyds class and to statutory requirements including firefighting and lifesaving (65 crew) for a cargo RoRo vessel
- To comply with passenger RoRo ship intact and damaged stability requirements
- Size of vessel not to exceed Calliope Dock capacity
- Speed not less than 15 knots, range of at least 6000 miles, and autonomous endurance of at least 40 days (65 crew)
- Ship's hull, main machinery, and vital systems to have life expectancy of at least 25 years, based on 4850 hrs pa at sea and 2100 hrs pa in harbour
- Ability to manoeuvre unaided and loiter offshore
- Vessel motions such that ship is capable of operating in Sea State 5, with restricted flying operations in Sea State 4
- Main machinery to UMS standard, with adequate emergency electrical generators for specified equipment

Cargo

- At least 1000 lane metres for vehicles plus space for 30 TEU (10 refrigerated) of general stores and 10 TEU of explosives
- Ability to autonomously embark and disembark the above dry cargo, and noting that cargo may be stored on the flight deck
- Vehicle decks to have adequate strength for 20 t axle loads, 5 m deck height, and vehicle lifts of 40 t capacity to all decks
- Specified capacities and transfer facilities for dieso, avcat, water and lubricants
- Petrol to be carried in containers or tankers
- Quarter or stern slewing ramp for a access to unimproved wharf with working load of 60 t

- Storerooms as specified for dry and refrigerated foods and stores and spares for general ship use
- Three 15 t per day reverse osmosis fresh water plants
- Light jackstay rigs for underway replenishment, and ability to replenish liquids to a vessel berthed alongside

Accommodation

- Accommodation for 65 naval crew to normal standards, plus reduced standard accommodation (and military lifesaving gear etc) for 150 additional persons
- Two sewage treatment plants, sized for peak load but either to be able to handle normal crew of 65
- Single galley sized for peak load (215 persons) plus separate messes
- Laundry facilities for 65 persons on self help basis
- Two berth sick bay and supporting first aid equipment
- Offices and workshops as specified
- Air conditioning (tropical standard) for work and accommodation spaces plus heating and ventilation for hangar and vehicle decks
- Specified restrictions on hazardous materials and products

Aviation and Boats

- Facilities to operate and hangar two medium helicopters, with main and emergency landing spots
- Ability to land a *Chinook*, with a suitable Vertrep point
- Facilities to carry and operate one RNZN rigid-hulled inflatable boat (RHIB)
- A crane with 25 t capacity at 7 m for aircraft recovery

Military Items

- Pintles for 4 machine guns and small arms magazine
- Provision for 4 SRBOC (decoy) launchers and supporting ESM facilities
- Normal navigation and command facilities, with some facilities for training and provision for a briefing room
- Naval communications and signalling equipment as specified with associated aerials and office space, plus internal communications and closed-circuit television (CCTV)