

APPENDIX XIII

REPLACEMENT VESSEL FOR THE R/V CALANUS

GENERAL CHARACTERISTICS

Shallow draft, multi discipline coastal zone research vessel.

Hull type: Catamaran, material aluminium

Length: 79 feet maximum

Draft: 4.5 feet maximum with full science payload, fuel, water, stores, etc.

Underwing clearance: Minimum 4 feet at full load

Propulsion: Twin diesel with controllable pitch propellers.

Design will allow for addition of bow trusters at a later stage.

Jet drives may be an alternative.

Generators: Twin diesel driven generator sets, 50 kw minimum each, 440vac, 3 phase, 60 Hz capable of being paralleled

UPS power: 7kw, 120\240vac, 60 Hz. distributed to all labs, bridge, and cabins.

Endurance: 10 days minimum

Range: 1500 nautical miles

Operation: 24 hours per day

Science accommodation: 12 in two person cabins

Crew accommodation: Four in two person cabins.

Heads and showers: Four total in accommodation areas and one head on main deck.

Cruise speed: 12 knots minimum in 2-4 foot seas

Operating sea state: 8-12 foot seas while maintaining minimum safe headway.

Station keeping:

- Capable of station keeping in 5-. foot seas and 20-25 knot winds.
- Capable as well of towing equipment at speeds of one knot.

After working deck area: Minimum 625 square feet with minimum width of 25 feet and minimum length of 25 feet.

Wet and dry lab: Minimum 600 square feet

Electronic lab: Minimum 120 square feet

Conductor winch:

Hydro winch:

A - frame: 4000 pound capability

Crane: Hiab articulated or equivalent

Work boats: 18 foot RtB

Dive support: Ladders and stairwells as typical of commercial dive vessels.

Mooring: Three point capability.

Air conditioning: Throughout labs, accomodation, bridge, galley, mess areas with individual controls in each cabin, lab, bridge, mess, etc. Capacity to handle full heat loads from all scientific instrumentation and complement of 16 persons in tropical conditions.

Survey: ABS standards, UNOKS Safety Rules, and USCG rules for passenger carrying vessels.

Hydraulics: Appropriate for operation of flinches, crane, and A - frame. System to allow simultaneous operation of A - frame and winches.

Transducer wells: Typical installation to include 150 and 600kSz acoustic doppler current profilertransducers, 12 kHz depth transducer, and 3.5 kHz sub-bbtoe profiling transducers.

Spud mounts: Hard mounting points located at four places on the outside of the hulls for future capability to add spuds for drilling or coring operations. Water depth of 15 feet, two foot seas, and 10-15 knots of wind being typical operating conditions.

Well: Under consideration; removable section of deck for between hulls operations, typical dimensions of 8 by 10~ feet.

Center A - frame: Under consideration re well.

Notched stern: Capability to remove a section of the after deck for lowering instrumentation, coring, drilling, etc. between hulls. May also incorporate relocation of A-frame.

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