

Materials

Fan Duct: The ducts are manufactured from Carbon Fiber and have an internal diameter of 1.16 meters. The 6 bladed axial fans provide the thrust. At the outlet of the fan ducts, five steering rudders and one elevator are fitted. These provide steering and longitudinal control. Each fan is driven by a tooth belt drive from one of the diesel engines. There is a clutch that can disengage the thrust fan drive from the diesel engine.

Lift Fan: One centrifugal fan provides the lift, the casing of which is manufactured from E Glass fiber. The impeller is made from Carbon Fiber and the shaft is stainless steel. One small hydraulic motor drives the fans. Either engine can provide the hydraulic power to run the fan to provide maximum lift in all sea conditions. The speed of the fan can be varied independent of engine RPM and a tachometer is fitted to the fans so that the speed can be monitored at the helm station. Two variable displacement hydraulic pumps are fitted to each of the diesel engines.

Deck Structure: The deck on this craft is Carbon Fiber core sandwich composite construction. The surfaces are gel coat finish. The walkways are coated with non-slip finish. The customer can specify the color scheme. All windows toughened glass and doors fitted are watertight.

Hull Structure: The Hull is molded using vacuum infused carbon fiber core sandwich composite technology and has a gel coat finish. Buoyancy foam with a density 32kg/Cubic Meter is incorporated into the hull construction, which not only provides full floatation in the event of a major collision but also provides impact-absorbing qualities should the hull strike a solid object. Sacrificial Skids are laminated to the hull so that the craft lands on them and not the Hull.

Mooring: At the bow of the vessel is a locker that houses the anchor and there are two flush mount pop up type cleats and fair leads on either side of the bow and two at either side of the stern of the vessel to allow the vessel to be tied up to a jetty or wharf. Fender holders are also fitted on either side of the vessel to protect the deck from damage when moored. Two bollards are fitted at either side of the stern for the purpose of towing another vessel.

Skirt: The Skirt system is simple and easy to maintain. This craft is fitted with a loop and finger skirt system. Anti-Bounce web in the side section of the Loop and Anti plough front section included in the Loop. The fingers can be easily replaced if damaged. The skirt material has been developed and tested over 8 years and has been found to provide the optimum in flexibility and the lowest wear coefficient. The fingers can be changed without the use of a crane.

Engine Room and Installation:

The main engines are mounted on a Sub-frame for ease of removal for major maintenance. Rubber isolation mountings are incorporated to reduce vibration. Exhaust system has insulation to avoid possible fire damage and the outlets are through the rear deck and insulated also.

Ample space in the engine room is provided to allow for easy access to and around the engines for service and maintenance.

Poly-chain Carbon GT toothed belts drive the thrust fans. It uses a soft clutch to engage and disengage.

The sub-frame and fan ducts can be removed as a unit or separately

Engine room contains all hydraulic systems and is appropriately ventilated to ensure proper operation of all equipment and a comfortable environment for maintenance personnel.

Provided with automatic sump pumps with alarm and manual override additionally a manual sump pump is provided.

An escape hatch is provided to provide emergency exit from the engine room

The engine room is insulated with noise absorbing material and surface is coated with fire retardant gel coat. There are two 3-kilogram CO₂ fire extinguishers mounted at the entrance to the engine room that are connected to the flooding system for the engine space. Fire Alarm fitted in the engine space that displays an audible alarm at the helm station. The CO₂ system can be operated from outside the engine room. The engine room allows easy access to service and maintain the machinery.

Air Conditioning System:

The air conditioning system consists of 2 compressors driven off each of the main propulsion engines and an overhead Evaporator unit located in the cabin. A central duct runs down the center of the roof to provide air distribution in the cabin for the occupants.

Controls for Air conditioning system are located on the operators' console

Engine Room Extinguishers:

Fire monitoring of the engine room is displayed on the bridge. A CO₂ Flooding system is fitted which is operated from the bridge and will flood the engine space.

CONTROL SYSTEMS: THE CONTROL SYSTEMS ARE A "FLY BY WIRE TYPE".

THE STEERING YOKE CONTROLS THE RUDDERS, ALSO FITTED TO THE STEERING YOKE ARE THE ENGINE SPEED AND ELEVATOR CONTROLS.

A dead man shut off switch is incorporated in the instrument panel in case of emergency.

ELECTRONIC FINGER TIP CONTROLS FOR CLUTCH FOR MAIN FANS.

As well as for the lift fans speed controls.

Instrumentation:

Each engine has the following gauge and/ or warning lights or audible warnings:

A number of switches are fitted to the instrument panel. These switches are labeled and easily read. They control headlights, bilge pumps, transfer pumps, Searchlight, Interior light, cabin lights, Air conditioning, Cooling fans,

Tachometer (2), Main engines Tachometer (2), Lift fan speed Oil pressure (2), Duplicated in the engine room Oil Temperature (2), Duplicated in the engine room Low oil (2), Voltmeter Amp meter Incline meter to show the trim of the craft High engine temperature, (2)

Alternator failure. (2)

Fuel Gauge depth (2)

Hydraulic oil tank level

Hydraulic pressure

Electrical Systems:

All systems duplicated 12V DC / 220V AC.

220 V AC 1.5kw Inverter is fitted to the craft.

2 Gel cell Batteries are connected in Parallel to provide engine starting and auxiliary power for the vessel

2 X 65 Amp alternators, powered by main engines.

Two starting batteries are isolated from the auxiliary power system so that they are always available for starting.

All batteries are charge from the main engines once underway

The inverter/ charger can charge the batteries from shore power.

All duplicated wiring to Lloyd's specifications, with appropriate circuit breakers and standard coded wiring.

Switchboards are fitted with BEP rest able Circuit breakers on all circuits

All Switchboards are housed in waterproof lockable compartments.

220V Power outlets can be provided on request.

Navigation and Communication Equipment:

1 set VHF Maritime radio including antennae, Navigation Lights (USCG Approved), Flashing Blue Light. USL approved navigation lights, flashing amber light, AM/FM radio and antennae

TRIALS: ALL SEA TRIALS AND INITIAL TRAINING TO BE CARRIED OUT IN TERNPORT BAY VICTORIA AUSTRALIA.

Additional training to be carried out in the crafts operational waters

Inside Miscellaneous Equipment:

First aid Kit Bag

9 SOLAS approved inflatable Life jackets

Search Light

Onboard operation manuals

Deck and Engineering Logs

Forward facing spotlights

Side facing floodlights



GALLERY



