

HINDUSTAN SHIPYARD LIMITED, VISAKHAPATNAM-5 ENQUIRY TECHNICAL SPECIFICATION OF GMDSS RADIO COMMUNICATION EQUIPMENT FOR 3 Nos 50T BOLLARD PULL TUGs - VC- 11162-64 FOR INDIAN NAVY		
Clause No.	Description of Technical Specification	Vendors reply Complied / Not Complied
1	The following Communication Equipment shall be supplied for each Tug as per the details given below. GMDSS (fitted for arrangement) Fitted for "A1" area as per SOLAS i. VHF Radio Telephone MMB Tx/Rx with DSC - 1 Set. ii. VHF Radio Telephone (Voice) - 1 Set iii. Navtex Receiver - 1 Set iv. EPIRB - 1 No v. SART - 1 No vi. VHF Walkie Talkies - 4 Sets. The total requirement is for 3 Nos Tugs.	
1.1	The make of the GMDSS Radio Communication Equipment : i. Thrane & Thrane, Denmark ii. FURUNO, Japan.	
2	RULES & REGULATIONS:	
2.1	The GMDSS Radio Communication equipment are required as per Sea Area - A1 for 50 Tonnes Boallard Pull Tug.	
2.2	The complete equipment shall conform to following rules & regulations, as applaicable to this type of vessel, including their latest amendments.	
2.2.1	SOLAS concerning Radio Communication for GMDSS	
2.2.2	Indian Merchant Shipping (Distress and Safety Radio Communications) Rules 1995.	
2.2.3	Indian Merchant Shipping (LIFE SAVING APPLIANCES) rules 1991.	
2.2.4	All the equipment covered in this technical specification shall conform to relevant latest performance standards adopted by IMO.	
2.3	Life Time Support: Supplier shall confirm the provision of life time support by providing for a minimum period of 20 years, except electronics where the minimum period will be 10 years after delivery of the last tug. In case of the equipment is likely to become obsolete, the manufacturer shall be committed to give a clear three (3) years notice to the Indian Navy to assess the requirement of " Life Time Buy" of spares.	
2.4	Training: The ship's crew and shore maintenance staff are required to be trained on the operation and maintenance of the equipment installed onboard.	

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2.5	Environmental Conditions: The equipment provided on the tug shall be marinised version and capable of continuously performing the specified duty under the ambient conditions in conformance to classification society rules applicable for Indian Coastal environmental conditions.	
2.6	The offered equipment shall be robust in construction to withstand shock / vibrations incidental to tug movements and shall be provided necessary anti-vibration mountings as required.	
2.7	Tally and diagram plates: All tallies and diagram plates shall be engraved and made of anodized aluminium alloy. Tally plates of the equipment should be prominently display the following information a) Manufacturer name b) Manufacturer Serial No. Type / Model c) Year of manufacture d) Electrical parameters viz ratings Voltage, Frequency, Current, Insulation details etc., as applicable. e) Details of connections f) Weight of equipment g) Danger lables in Red colour with White lettering are to be provided on all electrical equipment indicating the operating voltage.	
2.8	The equipment in its entirety shall give complete satisfaction to the shipyard and the ship's owners concerned. Any other part or parts of the equipment which are missing in this specification but are still necessary for the proper and efficient functioning of the equipment as a whole, Rules and Regulations shall be included in the scope of supply.	
2.9	Any damages, shortages, defectives or deviation from purchase order shall be rectified by the supplier at free of cost.	
3	SCOPE OF SUPPLY AND WORK OF THE SHIPYARD:	
3.1	Making the necessary seatings for various accessories will be shipyard's scope of work. However, the normal foundation for individual accessories shall be provided by the suppliers. Any special seatings required for whip aerials and other equipment shall also be provided by the suppliers.	
3.2	laying of inter connecting cables and supplying the required labour and electricians for carrying out the work, under the supervision of the suppliers service engineer.	
4	SERVICE ENGINEER :	
4.1	Supplier's Local Service Engineer shall attend for Joint Inspection at HSL after receipt of the equipment in HSL, inorder to ascertain for any shortages and to supply the same.	

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4.2	The complete system of the equipment shall be installed on board the vessel under the complete responsibility of the supplier and for this purpose, supplier shall depute their competent service engineer to supervise the insatallation of work, along with necessary service manuals, spares, tools etc.	
4.3	The supplier's Service Engineer shall test and commission the equipment.	
4.4	For GMDSS Radio Equipment, the service engineer shall present the installation before sea trails and after sea trails for the survey by the radio Surveyor, Mercantile Marine Department / DG Shipping for the purpose of granting safety radio certificate.	
4.5	Supplier's Service Engineer shall attend the sea trails of the vesel as required during which period the complete equipmennt shall be demonstrated to the Ship's owners for satisfactory operation.	
4.6	Service Engineer charges on Lumpsum basis for checking the installation and commissioning, HATs & SATs shall be indicated for all the equipment.	
5	Following points shall be considered and information shall be furnished essentially along with the technical offer as otherwise the offer is liable for rejection.	
5.1	List of deliverables.	
5.2	Original Technical Leaflets - 2 Sets	
5.3	Valid IMO/DG Shipping Type Approval Certificates for all the quoted equipment as applicable - 2 Sets	
5.4	The tenderer shall have the authorization certificate from OEM for sales and service support in India. Copy of the same shall be enclosed to the Technical Bid.	
5.5	The tenderer shall depute their qualified service engineers for commisioning HATs & SATs of the offered equipment. Copies of training certificates shall be enclosed to the Technical Bid.	
5.6	In the PRICE BID, separate unit prices shall be indicated for each of the equipment.	
5.7	The above equipment shall be offered as a single package	
5.8	Unpriced technical offer in price format.	
5.9	Weight, CG and dimensions of offered equipment and units.	
5.10	Preference will be given for compact size and least weight equipment meeting all the requirements.	

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5.11	Clause-wise complaine to Technical specification confirming all requirements stated at respective clauses and sub-clauses. Deviations if any need to be indicated against respective clauses.	
5.12	Schematic diagrams with cable sizes and dimensional details.	
6	Within 15 days after receipt of HSL's detailed order, the supplier shall forward the following to HSL:	
6.1	Detailed dimesional and erection drawings, schematic connection & wiring diagrams, detailed instructions for installation of all the equipment - 2 Sets	
6.2	Detailed bill of materials covering complete scope of supply of various equipmet, aerial materials, interconnecting cables, spares etc - 2 Sets	
6.3	Battery capacity calculations.	
7	TECHNICAL SPECIFICATION:	
7.1	The scope of supply indicated below is for One Tug. The requirement is for three (3) Nos Tugs.	
8	VHF Radio Telephone Equipment MMB Tx/Rx with DSC : 1 Set	
8.1	Power Supply: The equipment shall be suitable for working on both 230 VAC, 1 Ph, 50 Hz and 24VDC operation, with automatic changeover facility to 24VDC, in case of AC supply failure. Necessary power supply units shall be included in the scope of supply.	
8.2	All international maritime VHF channels and USA channels shall be provided. The equipment shall have DSC (Digital selective calling) facility and DSC watch keeping receiver. The relevant IMO resolutions shall be complied with.	
8.3	Dual watch facility on channel - 16 (156.8 MHz) and any other selected channel shall be provided.	
8.4	The euipment shall comprise of the following:	
8.5	Combined Transceiver and control unit complete with hand set, etc, suitable for Flush Mounting in wheel House Console / Bulk Head Mounting in Wheel House - 1 Set	
8.6	The RF output power of the transmitter shall be 25 W, provision shall be available to reduce the RF power output to 1 W.	
8.7	Glass Fiber enclosed marine VHF Dipole aerial complete with connector, fixing clamps etc. and 30 mtrs of coxial cable - 2 Sets.	
9	VHF Radio Telephone Equipment (Voice) - 1 Set	
9.1	Power Supply: The equipments shall be suitable for working on both 230VAC, 1 Ph, 50 Hz and 24VDC operation, with automatic changeover facility to 24VDC, in case of AC supply failure. Necessay power supply units shall be included in the scope of supply.	
9.2	VHF Radio Telephone equipment shall comprise of the following	

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9.3	25 Watt VHF Radio Telephone Equipment (Voice only) suitable for flush mounting on wheel house console (HSL's supply). All international channels and USA channels shall be provided - 1 Set	
9.4	Weather proof type extension VHF Radio telephone handset with suitable enclosure, complete with weather proof junction box and 15 m of inter connecting cable - 1 set	
9.5	Glass fiber enclosed marine VHF whip aerial complete with connector, fixing clamps etc. and 30 m of coaxial cable - 1 Set.	
10	Navtex receiver : -- 1 Set	
10.1	Power Supply: The equipment shall be suitable for working on both 230 VAC, 1Ph, 50 Hz and 24VDC Power supplies with a facility for automatic changeover to 24 V DC in the event of failure of AC mains.	
10.2	The equipment shall comprise of the following:	
10.3	The Navtex receiver shall be of the latest state - of - art design complete with direct printing receiver, built-in printer, etc., providing access to the free Navtex service. The equipment shall be suitable for bulkhead mounting / flush console mounting - 1 Set	
10.4	2 Nos. paper rolls shall be included in the scope of supply.	
10.5	Active receiving whip antenna incorporating a pre-amplifier with suitable protection shall be supplied complete with mounting accessories and 40 m of co-axial cable - 1 Set.	
11	9 GHz RADAR Transponder (SART) : 1 Set	
11.1	9 GHz Radar transponder with built-in antenna, batteries, controls and indicators complete with mounting accessories - 1 set	
11.2	Programming and test report, duly signed by testing personnel and endorsed by MMD/IRS shall be forwarded for Radar Transponder, registration of SART shall also be arranged by the supplier.	
11.3	IMO Stickers for SART shall also be supplied along with the equipment.	
12	406 MHz SATELLITE EPIRB - 1 Set	
12.1	406 MHz Satellite EPIRB with built-in 406 MHz COSPAS-SARSAT location transmitter, 121.5 MHz Homing transmitter, antenna, batteries, control and indicators complete with mounting accessories and hydrostatic release (float free mechanism) etc - 1 Set	
12.2	Programming and test report, duly signed by testing personnel and endorsed by MMD/IRS shall be forwarded for EPIRB, registration of EPIRB shall also be arranged by the supplier.	
12.3	IMO Stickers for EPIRB shall also be supplied along with the equipment.	
13	VHF WALKIE - TALKIE : 4 Sets	
13.1	The make of the walkie-talkie : MOTOROLA, GP-338	

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13.2	VHF hand held Radio sets with speech secrecy unit and chargers shall be supplied. The sets shall be complete with the accessories like flexible antenna, belt clip, hand starp, etc. Rechargeable batteries and individual battery chargers suitable for 230VAC, 1Ph, 50 Hz operation shall be supplied - 4 Sets	
13.3	Note 1: The details of VHF marine channels to be provided for these walkie- talkie sets will be indicated at the time of ordering the equipment for arranging the necessary programming. .	
13.4	Note 2: The mAH capacity and voltage of the re-chargable batteries shall be clearly specified in the offer.	
14	A Battery pack of suitable capacity with battery charger for arriving 24VDC power supply for VHF 1&2, Navtex Receier.	
15	Installation and fitting materials, multi pin / antenna sockets, including special interconnecting cables etc., for each of the equipment as required - 1 set	
16	Installation / operation manuals shall be supplied for each of the equipment - 6 sets	
17	Comprehensive part list (CPL) and Part Identification list (PIL) -Seven (7) sets of hard copy and One (1) set of soft copy on CD shall also be supplied.	
18	SPARES:	
18.1	Spares in accordance with the manufacturer's standard and satisfying statutory requirements shall be supplied for each of the equipments - 1 set	
18.2	On Board Spares: The OB spares as recommended by manufacturer for scheduled servicing and maintenance of equipment falling due within the first operational cycle of the tug of 2 years shall be quoted separately with unit price of each item offered. The order for OB spares, tools and test equipment shall be done concurrently while placing the order for main equipment. The spares consumed within the guarantee period to rectify / liquidated known defects shall be replaced free of cost. The unpriced list of OB spares shall be enclosed to the technical offer.	
18.3	Base & Depot Spares: The B & D spares as recommended by the manufacturer for 5 years exploitation of the tug shall be quoted separately with unit price of each item offered. The quotation from OEM shall be in ILMS format. The quotation shall be valid for 18 months. The Part Identification List (PIL) shall be enclosed to the technical bid for scrutiny.	

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