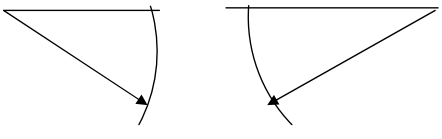


TECHNICAL SPECIFICATION FOR SUPPLY OF SIDE SCUTTLES AND WINDOWS REQUIRED FOR 50T. BOLLARD PULL TUG. FOR INDIAN NAVY – HSL YARD NOS. - 11162 TO 64.		PRQ NO: E/952/11-12 Revision No. : 1 Dept: MEO Date: 04-11-2011 Pages: 6
<u>General - PART-'A'</u>		
Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
1	<u>SCOPE OF SUPPLY OF SUPPLIER:</u>	
1.1	To manufacture and supply of the side scuttles and windows in accordance with BSMA standard as per Description of Supply and other requirements stated in this specification.	
1.2	The windows & side scuttles shall be inspected, tested and approved by Indian Register of Shipping (IRS).	
1.3	Test certificates shall be supplied in one original and five copies and manufacturer shall bear the fees and expenses for the same.	
1.4	Painting, greasing and oiling of all the necessary parts of the equipment before dispatch to prevent corrosion and damage during transport and storage.	
1.5	Packing and transporting of all the equipments with their component parts in good condition and delivery of the equipment to Hindustan Shipyard.	
1.6	Furnishing all the technical literature such as installation, operation and maintenance manuals, detailed dimensional drawings of the complete equipment to Shipyard in English language and metric dimensions for Shipyard use.	
1.7	Any error, omission or discrepancy observed in the specification is to be brought to the notice of Shipyard and made good. The supplier shall ensure that all the items that are necessary for proper and efficient Functioning of the equipment is included in their scope of supply.	
2	<u>SCOPE OF WORK OF SHIPYARD:</u>	
2.1	Installing, and hose testing of side scuttles and windows on board the vessel in the presence of the ship Owner / Surveyor of Class / Mercantile Marine Department, India.	
3	<u>INSPECTION OF MATERIAL IN SHIPYARD:</u>	
3.1	The material will be inspected in Shipyard in relation to the specifications and all deviations and or any defects observed shall be notified to supplier for making good by the suppliers free of cost.	
3.2	However the above initial inspection in our stores shall not in any way relieve the suppliers of their responsibility for all the short comings and defects that may come to light when the materials are fitted on board and when they are duly commissioned / tested for their performance evaluation.	
4	<u>GUARANTEE:</u>	
4.1	The equipments supplied shall be complete in all respects as to their function and performance, free from manufacturing and material defects and shall give full satisfaction to Shipyard and Ship Owners.	
4.2	The supplier shall guarantee the equipment against any defects or failures that may arise due to faulty design, defective material employed or poor workmanship involved on their part for a period of 12 months from the date of delivery of the vessel to the Owners or 30 months from the date of receipt of last consignment of the material procurements which ever is earlier.	

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4.3	In case of suppliers guarantee being applicable, the supplier shall either arrange to repair the defective parts of the equipment at their cost or supply new ones in compensation free of charge at the earliest and by quickest possible means. The supplier shall provide further guarantee of 12 months in respect of such parts replaced during the guarantee period.	
4.4	Approval of basic drawings and dimensions of the equipments by Shipyard shall not relieve the suppliers from their responsibility of their guarantee.	
5	<u>GENERAL INFORMATION:</u>	
	General information of ship and rules and regulations for which side scuttles and windows are required.	
5.1	Type of vessel : 50 T Bollard pull tug	
5.2	Classification details : Indian Register of Shipping	
5.3	Class Notation : The vessel shall be classed with Indian Register of Shipping having Class Notation + SUL * TUG * + IY, AGNI 1. The vessel Class Notation as Fire Fighting Vessel (FFV) should meet AGNI-1 requirements.	
5.4	Rules and Regulations.	
5.4.1	Indian Merchant Shipping rules for construction and survey of Cargo ship rules 1991.	
5.4.2	I.R.S. Rules.	
5.4.3	Load Line Rules - 1966 including latest amendments.	
6	<u>WEIGHTS AND DIMENSIONS:</u>	
6.1	Weights and Dimensions of each equipment offered shall be indicated in the offer.	
6.2	Note : Weights of equipment / items are critical in the project, hence keeping in view the criticality of these weights on the ships design, this parameter shall be given due consideration while placement of the order for the equipments. Hence suppliers are requested to offer their equipments with possible minimum weight.	
6	<u>ORIENTATION OF HINGES:</u>	
	The orientation of the openable windows and side scuttles for left hand or right hand hinge shall be as shown below.	
	<p>LEFT HAND HINGE RIGHT HAND HINGE</p>  <p>VIEW FROM OPENING SIDE</p>	

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Encl: Part-B

Quantities of Windows and Side Scuttles - PART - 'B'

Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
1	<u>DESCRIPTION OF SUPPLY FOR SIDE SCUTTLES:</u>	
1.1	The side scuttles shall be manufactured in conformity with BSMA 24. All the side scuttles shall be of weld on type with brass /Aluminium glass holder. The material for main frame, dead light and lugs shall be of Lloyds Grade 'A' steel or equipment. The glass holder shall be of Naval Brass (Marine Quality Br)/ Aluminium. The hinge pins shall be of stainless steel. The channel rubber for glass shall be of neoprene rubber and gaskets shall be synthetic rubber resistant to sea water and ozone with hardness of 40+or-5 IRHD and working temperature from -20 deg. C to +70 deg. C.	
1.2	To keep the deadlights and glass holder in open position holding arrangement shall be provided and same shall be sturdy and aesthetic.	
1.3	Fixed type side scuttles 300mm dia, ISO Type-A with M.S. main frame with 15mm thk. Toughened glass and M.S. Deadlight, with spigot length of 800mm. --- 4Nos. (per Tug)	
1.4	Openable type side scuttles 300mm dia, ISO Type-A with M.S. main frame & Brass glass holder or Aluminium Glass Holder with 15mm thk. Toughened plain glass and M.S. Deadlight. Left Hand type --- 4Nos. (per Tug) Right Hand type --- 6Nos. (per Tug)	
1.5	Fixed type side scuttles 250mm dia, ISO Type-B with M.S. main frame with 8mm thk Toughened glass and M.S. Deadlight --- 3Nos. (per Tug)	
1.7	Spare glass of 15mm thk. to suit 300 mm dia side scuttles --- 1No.(per Tug)	
1.8	Spare glass of 8mm thk. to suit 250mm dia side scuttles --- 1No.(per Tug)	
1.9	<u>SPARE GASKETS AND TOOLS:</u>	
1.9.1	Rubber gaskets of same shape and size to suit the above side scuttles of 300 mm dia for deadlight. ... 2Nos.	
1.9.2	--DO-- for 250 mm dia for dead light ... 1No.	
1.9.3	--Do-- for 300 mm dia glass holders ... 2 Nos.	
1.9.4	Channel rubber for 15 mm thick glass ... 2 Nos.	
1.9.5	-do- 8 mm glass ... 1 No.	
1.9.6	Spanners to operate swing nut of type 'A' side scuttles ... 3 Nos.	
1.9.7	Spanners to operate the glass retaining ring of side scuttles of 250 dia & 300mm dia. ... 2 Nos. each.	
2	<u>DESCRIPTION OF SUPPLY FOR WINDOWS:</u>	
2.1	<u>BOLTED TYPE WINDOWS :</u>	
2.1.1	The windows shall be manufactured in conformity with BSMA 25. Marine quality Al.alloy material shall be used for main frame and glass holder. The Alu. alloy frame shall be anodized to natural colour, matt finish. The hinge pins shall be of stainless steel. The channel rubber for glass shall be of neoprene rubber and gaskets shall be with hardness of 40+ or -5 IRHD and working temperature from -20 deg. C. to +70 deg. C.	

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2.1.2	For bolted type windows S.S. fixing bolt (csk) with nut and washer and nylon conical and plain washer shall be supplied (with 10% extra as spares). Bolt holes shall be drilled on main frame to suit the fixing bolts supplied. 3 mm thick neoprene rubber gaskets are to be cut properly to the shape of windows main frame flange with precise holes for fixing bolts. The pitch of the glazing screw shall be not more than 75 mm and pitch of fixing bolt shall be not more than 100 mm. Retaining hook shall be provided for all openable windows to hold the windows in open position at different opening angles and same shall be sturdy and aesthetic.	
2.1.3	Fixed window of 850mm X 1100 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. – 5 of sketch No. WDA/11162-64/001 C.... 2 Nos. (per Tug)	
2.1.4	Fixed window of 850mm X 1300 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. – 5a of sketch No. WDA/11162-64/001 C.... 1 No. with CVS hole 300 dia (per Tug)	
2.1.4 a)	Spare glass of 15mm thk to suit above window ... 1 No. (per Tug)	
2.1.5	Fixed window of 1070/850 mm X 900 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. 6.1-2Nos & 6.2 -2Nos. with CVS holes of 300mm dia for each glass all as per sketch No. WDA/11162-64/001 C 4 Nos. (per Tug).	
2.1.5 a)	SPARE glass of 15 mm thick to suit window of size 1070/850 mm X 900mm H ... 1 No. (per Tug)	
2.1.6	Fixed window of 700mm X 1300 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. – 7.1 - 2 Nos. & 7.2 - with CVS holes - 2Nos all as per sketch No. WDA/11162-64/001 C ... 4 Nos. (per Tug)	
2.1.6 a)	Spare glass of 15mm thk to suit above window ... 1 Nos. (per Tug)	
2.1.7	Bolted type top hinged inside opening window of 850 mm W x 1100 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. - 8 of sketch No. WDA/11162-64/001 C ... 2Nos. (per Tug)	
2.1.7 a)	Spare glass of 15mm thk to suit above window ... 1 No. (per Tug)	
2.1.8	Bolted type top hinged inside opening window of 850 mm W x 800 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 15 mm thick toughened clear glass as per Sl. No. – 9 of sketch No.WDA/11162-64/001 C ... 2 Nos. (perTug)	
2.1.8 a)	Spare glass of 15mm thk to suit above window ... 1 No. (per Tug)	
2.1.9	Fixed window of 850 mm W x 350 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 10 mm thick toughened clear glass as per Sl. No. - 10 of sketch No. WDA/11162-64/001C ... 5 Nos.(per Tug)	
2.1.9 a)	Spare glass of 10mm thk to suit above window ... 1 No. (per Tug)	
2.1.10	Fixed window of 700 mm W x 350 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 10 mm thick toughened clear glass as per Sl. No. - 11 of sketch No. WDA/11162-64/001 C ... 4 Nos.(per Tug)	
2.1.10 a)	Spare glass of 10mm thk to suit above window ... 1 No. (per Tug)	

Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
2.1.11	Fixed window of 750/1000mm X 350 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 10 mm thick toughened clear glass as per Sl. No. - 12.1- 1No & 12.2 -1 No. of sketch No. WDA/11162-64/001 C Orientation of Glass as shown in sketch to be followed. ... 2 Nos. (per Tug)	
2.1.11 a)	Spare glass of 10mm thk to suit above window ... 1 No. (per Tug)	
2.1.12	Fixed window of 950/1210mm X 350 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 10 mm thick toughened clear glass as per Sl. No. – 13.1- 1 No & 13.2 -1No.all as per sketch No. WDA/11162-64/001 C Orientation of Glass as shown in sketch to be followed ... 2 Nos. (per Tug)	
2.1.12 a)	Spare glass of 10mm thk to suit above window ...1 No.(per Tug)	
2.1.13	Fixed window of 500/760 mm W x 350 mm H & 450/710 W x 350 mm H clear glass size with main frame and glass holder of Anodized alu. alloy with 10 mm thick toughened clear glass as per Sl. No. - 14.1 -1No, 14.2 -1No. & Sl. No. - 14.1a -1 No, 14.2a -1No all as per sketch No. WDA/11162-64/001C . Orientation of Glass as shown in sketch to be followed ... 4 Nos. (per Tug)	
2.1.13 a)	Spare glass of 10mm thk to suit above window ... 1 No. (per Tug)	
2.1.14	Spares:	
a)	Spare Rubber channel for 15 mm thick glass ... 5 Nos.	
b)	Spare Rubber channel for 10 mm thick glass ... 2 Nos.	
c)	Spare Rubber Gasket for Glass holder of openable windows ... 1No.	
d)	Spare fixing bolt with nut and washer total requirement (as stated at para 1.1 above) ... 10%	
3	MARKING :	
3.1	The side scuttle / windows supplied shall be permanently marked with the following.	
3.2	Inspecting authorities stamp of approval on all side scuttles and windows.	
3.3	Manufacturers (trade mark). Type, Nominal dimension and thickness of glass fitted.	
3.4	Glass manufacturers name on the glass.	
6.5	Order No., Ship No.	
3.6	Orientation of window / side scuttles shall be marked with paint.	
4	DOCUMENTS TO BE SUPPLIED:	
4.1	DOCUMENTS TO BE SUBMITTED ALONG WITH THE QUOTATION:	
4.1.1	Three copies each of the dimensional drawings for each type and size of side scuttles / windows.	
4.1.2	Holding arrangement of side scuttles and retaining hook.	
4.1.3	Bill of materials indicating the weights of each item.	
4.1.4	Evidence of previous supply for ships for the sizes of windows & side scuttles indicated in this specification.	
4.1.5	Clause-wise confirmation to all the clauses of this specification (Both Part-A & Part-B)	
4.1.6	Type of Electrodes to be used for weld on type with brass/ Aluminium glass holder shall be indicated.	
4.2	DOCUMENTS AND SAMPLES TO BE SUBMITTED WITHIN ONE WEEK OF RECEIPT OF PURCHASE ORDER FOR HSL APPROVAL:	
4.2.1	Three copies each of the final drawing for each type and size of side scuttles / windows.	

Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
4.2.2	Holding arrangement of side scuttles and retaining hook.	
4.2.3	Bill of materials indicating the weights of each item.	
4.2.4	Samples of holding arrangement of side scuttles and retaining hook for windows.	
4.3	<u>DOCUMENTS TO BE SUBMITTED ALONG WITH SUPPLY:</u>	
4.3.1	Manufacturers work test certificate for side scuttles, windows.	
4.3.2	Classification Society's test and inspection certificate in Original and Five copies inline with para 1.2 of Part-A of this Specification.	
4.3.3	Guarantee certificate.	
5	<u>REJECTION CRITERIA:</u>	
5.1	Your offer will be rejected unless the following are furnished along with the quotation.	
5.2	Three copies each of the dimensional drawing for each type and size of side scuttles / windows .	
5.3	Holding arrangement of side scuttles and retaining hook.	
5.4	Bill of materials indicating the weights of each item.	
5.5	Evidence of previous supply for ships for the sizes of windows & side scuttles indicated in this specification.	
5.6	Clause-wise confirmation to all the clauses of this specification (Both Part-A & Part-B)	

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Encl: Drg. of Window Glass Shapes no: WDA/11162-64/001 C