

TECHNICAL SPECIFICATION FOR SUPPLY OF HEAVY DUTY RUBBER FENDERS REQUIRED FOR 50 TON BOLLRD PULL TUGS FOR INDIAN NAVY – HSL YARD NOS. 11162-64.		PRQ NO: E/1489/11-12 Revision No. : 0 Dept: MEO Date: 27.07.2011 Pages: 3
<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	The supply shall include complete material as detailed in Part-B enclosed to this specification.	
1.2	Furnishing of complete technical literature, illustrative pamphlets, drawings etc., for the equipment offered / ordered in English language and in metric units. Also furnish the soft copy of the above & drgs in Auto Cad format.	
1.3	Furnishing of test reports and inspection certificates as required per Part-B.	
1.4	The materials shall be inspected, tested and approved by NES Approving Authorities.	
1.4.1	Test certificates shall be supplied in one original and five copies and manufacturer shall bear the fees and expenses for same.	
1.5	Packing and Forwarding of the fenders to prevent any damage during transportation.	
2	<u>GUARANTEE:</u>	
2.1	The supplier shall guarantee the materials 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 vessel to the owners or 30 months from the date of supply of materials.	
2.2	In case of suppliers guarantee being applicable the suppliers shall make arrangements to repair the defects of the materials free of cost at the earliest and quickest possible means. The supplier shall provide further guarantee of 12 months in respect of such repair / replacements made during guarantee period.	
3	<u>INSPECTION:</u>	
3.1	Inspection of materials shall be carried out at HSL in relation to specification and any deviations pointed out shall be made good by supplier free of cost.	
3.2	However this initial inspection shall not relieve the supplier of their responsibility for the short comings and defects that may come to light when the materials are erected and supplier shall make good the short comings and defects.	

Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
4	<u>REJECTION CRITERIA:</u>	
4.1	The suppliers are advised to go through all the clauses of this specification and submit the quotation together with all the documents and information as required under Para-2.1 of Part-B of this specification.	
4.2	Technical offers and price parts shall be submitted separately in quadruplicate.	
4.3	All the clauses of this technical specification including Part-B shall be agreed in toto. Deviations of any clauses shall be specified separately.	
4.4	The offered equipment shall meet the parameters specified at paras 1.1 to 1.7 of Part-B. Equipments having lesser parameters than the specified in the above paras shall be rejected.	
4.5	The quotation is liable for rejection for the non-compliance to the requirements as stated above at paras 4.1 to 4.4.	

Encl: Part-B

TECHNICAL SPECIFICATION FOR RUBBER FENDERS PART-'B'

Clause No.	Description of Technical Specification	Vendors Reply Complied / Not complied
1	<u>DESCRIPTION OF SUPPLY:</u>	
1.1	The supply of 'D' type Heavy duty Rubber Fenders shall be of neoprene and as per the details of "D" type rubber fenders Drawing no. 39002A (1sheet).	
1.2	The cross section, size, lengths and configuration of rubber fenders and quantity shall be as shown in the enclosed drawing no. 39002A (1sheet). The quantities indicated in the drawing are per ship.	
1.3	The linear tolerances to rubber fenders shall be +0, -2 to facilitate easy fixation of fenders skirting plates.	
1.4	The fender shall be black in colour and shore hardness of 60 + 5 degrees or – 4 degrees.	
1.5	The fender material & properties used shall conform to be as per NES-170 & other related standards referred to this NES. Tenderers are to quote along with a copy of above standard for HSL's review, for the fenders quoted.	
1.6	Physical properties of the rubber fenders shall be as per NES- 170 and physical properties tests shall be tested at Government Test House and approved by NES Approving Authorities.	
1.7	The following physical properties shall be certified:-	
1.7.1	Tensile strength -	
1.7.2	Young's Modulus -	
1.7.3	Stiffness -	
1.7.4	Elongation -	
1.7.5	Shore Hardness -	
1.7.6	Compression set -	
1.7.7	Tear Resistance -	
1.7.8	Oil Resistance -	
1.7.9	Ozone Resistance -	
1.7.10	After ageing heat Resistance -	
2	<u>DOCUMENTS TO BE SUPPLIED -ALONG WITH TENDER</u>	
2.1	Full description of supply with material specifications etc.	
2.2	Weight of fenders per meter and total weight of fenders per ship.	
2.3	<u>BEFORE DESPATCH OF THE EQUIPMENT:</u>	
2.3.1	Physical properties test certificates & reports issued by Test House and Certified by NES Approving Authorities are to be supplied in one Original and five copies	
2.3.2	Load versus deflection test to be carried out at Approved Test House for determining energy and reaction.	
2.3.3	Works certificates for physical properties of the compound used in manufacturing of the fenders shall be supplied.	
2.3.4	A sample of fender is to be submitted for HSL's approval before bulk supply.	

CHIEF MANAGER (OAD&M)