

Phosphoric Acid Barge					
Ship Building Specifications					
SI No.	Clause No.	As Per TPS		Changed to	
1	1.3.1	LOA :	50 m (shall not exceed 50 m)	LOA :	52 m (shall not exceed 52 m)
		Breadth :	8.5m (shall not exceed 8.5 m)	Breadth :	9.6m (shall not exceed 9.6 m)
2	1.5.4.1	<p>2 nos. independent bullet tanks shall be located in cargo hold. The bullet tanks shall be rubber lined inside to a thickness of 6 mm and two 3 mm thick rubber lining shall be applied one above another instead of single 6mm thick lining. Joints of 3 mm thick rubber lining shall be made in a staggered manner. No two joints of lining shall come one above another. The details of cargo bullet tanks are given in Sec. X. The filling and discharge pipes from each tank shall be as per the Piping and Instrumentation Diagram (P&ID) attached. Supply of pumps required for unloading phosphoric acid shall be in the scope of contractor.</p>		<p>2 nos. independent bullet tanks shall be located in cargo hold. Rubber lining shall be as per details mentioned in Spec: 32667-11-SE-CT101. Entire rubber lining of internal surface shall not be made by single layer. Lining to required thickness shall be made by two layers. Joints of the rubber lining shall be made in staggered manner. No two joints of lining shall come one above the another. The details of cargo bullet tanks are given in Sec. X. The filling and discharge pipes from each tank shall be as per the Piping and Instrumentation Diagram (P&ID) attached. Supply of pumps required for unloading phosphoric acid shall be in the scope of contractor.</p>	
3	10.2.4	<p>An external corrosion allowance of 3 mm shall be considered for fabrication of bullet tanks.</p>		<p>An internal corrosion allowance of 3.2 mm shall be considered for fabrication of bullet tanks(As per Spec:32667-11-SE-CT101)</p>	
4	10.2.6	<p>Sufficient ullage shall be considered while designing the bullet tanks. Minimum 10% of volume of 200 MT phosphoric acid shall be considered as ullage of each bullet tank for phosphoric acid. Each Bullet Tank including ullage shall be able to store and transport 200 MT phosphoric acid.</p>		<p>Sufficient ullage shall be considered while designing the bullet tanks. Minimum 10% of volume of 200 MT phosphoric acid shall be considered as ullage of each bullet tank for phosphoric acid. Each Bullet Tank including ullage shall be able to store and transport 200 MT phosphoric acid. Dead volume required for the pump shall be maintained in each bullet tank.</p>	
5	10.2.17	<p>Detailed Quality Assurance Plan (QAP) shall be as per codes and standards of ASME SEC IX and it shall be got approved from Classification agency. All internal surfaces of the bullet tanks, nozzles and flanges shall be rubber lined. Rubber lining shall be as per the specifications mentioned in Spec no.030.B attached. Thickness of rubber lining shall be 6mm. While applying lining, two 3 mm thick rubber lining shall be applied one above another instead of single 6mm thick lining. Joints of 3 mm thick rubber lining shall be made in a staggered manner. No two joints of lining shall come one above another.</p>		<p>Detailed Quality Assurance Plan (QAP) shall be as per codes and standards of ASME SEC IX and it shall be got approved from Classification agency. All internal surfaces of the bullet tanks, nozzles and flanges shall be rubber lined. Rubber lining shall be as per the specifications mentioned in IS 4682 for Ebonite rubber lining attached. Rubber lining shall be as per details mentioned in Spec: 32667-11-SE-CT101. Entire rubber lining of internal surface shall not be made by single layer. Lining to required thickness shall be made by two layers. Joints of the rubber lining shall be made in staggered manner. No two joints of lining shall come one above the another.</p> <p>IS 4682: Ebonite Rubber Lining Specifications are attached</p>	

6	10.4.4	Valves shall conform ASME B16.34 & the material of construction valves shall be ASTM A 8290 CD4MCU (Subject to approval from classification agency). All shutoff valves provided shall be Ball valves. Size of the ball valves shall be same as the pipe. Loading & Unloading pipe lines and valves shall be designed as per the pressure rating and discharge of loading and unloading pumps.	Valves shall conform ASME B16.34 & the material of construction valves shall be Alloy 20 (Subject to approval from classification agency). All shutoff valves provided shall be Ball valves. Size of the ball valves shall be same as the pipe. Loading & Unloading pipe lines and valves shall be designed as per the pressure rating and discharge of loading and unloading pumps.
7	10.4.9	Dry Discharge Coupling(DDC) shall be provided for both the cargo bullet tanks at the shore connection as per the P&ID.	Dry Disconnect Coupling(DDC) shall be provided for both the cargo bullet tanks at the shore connection as per the P&ID. Material of Construction of DDC shall be Alloy 20 .
8	10.5.2	One standby vertical submersible pump along with motor shall also be provided. Stand by pump shall be placed on weather deck at a suitable location for easier accessibility. Stand by Pump shall be placed in a store room build over weather deck. Store room shall be provided accordingly.	One standby vertical submersible pump along with motor shall be provided.
9	10.5.7	Unloading pump shall be designed for discharging the phosphoric acid and pumping out water inside the bullet tanks, which is used for cleaning the internal surfaces of the bullet tanks	Unloading pump shall be designed for discharging the phosphoric acid. A separate drain pump shall be provided for draining acid from tanks during inspection and cleaning.
10	10.7.1	A sounding pipe along with dip tape shall be installed on bullet tanks for level measurement of phosphoric acid.	Level measurement of the bullet tanks shall be done by radar. Details of the Radar level measuring instrument are mentioned in Spec: 32667-11-SE-L101. In addition to radar level measurement a separate sounding pipe along with dip tape shall be installed on bullet tanks for level measurement of phosphoric acid.
SPECIAL REQUIREMENTS OF PROJECT			
1	3.7	Rubber lining of the bullet tanks shall be as per the Spec. No. 030B.	Rubber lining of the bullet tanks shall be as per the IS: 4682
2	4.4.3	The bullet tanks shall be rubber lined to a thickness of 6 mm as per the guidelines given in the Spec. 030B. While applying lining, two 3 mm thick rubber lining shall be applied one above another instead of single 6mm thick rubber lining. Joints of 3mm thick rubber lining shall be made in staggered manner. No two joints shall come one above another.	All internal surfaces of the bullet tanks, nozzles and flanges shall be rubber lined. Rubber lining shall be as per the specifications mentioned in IS 4682 for Ebonite rubber lining attached. Rubber lining shall be as per details mentioned in Spec: 32667-11-SE-CT101. Entire rubber lining of internal surface shall not be made by single layer. Lining to required thickness shall be made by two layers. Joints of the rubber lining shall be made in staggered manner. No two joints of lining shall come one above the another. IS 4682: Ebonite Rubber Lining Specifications are attached

Technical Clarification		
Query No.	Bidder Query	Clarification
1	Technical Procurement Specification (TPS) Can SS304 material be used in lieu of SS316 for name plates of valves, air pipe and sounding pipe heads etc	Name plates shall be SS316
2	Technical Procurement Specification (TPS) Bidder has a flanging machine which can flare flanges for pipes of size 25NB to 200NB. Instead of the conventional flange welding which is mentioned in the TPS, this method is superior and time saving. Can the flanging machine be used instead of welding flanges to pipes.	Flanges shall be welded to the pipes. Flaring shall not be done
3	Technical Procurement Specification (TPS) Is there a NAS standard for which hydraulic flushing is to be carried ?	No
4	Technical Procurement Specification (TPS) In PGTR, for the five cycles or more, consumables like fuel oil, lube oil, etc are under FACT scope or MDL scope?	All consumables required for performing the PGTR of the barge shall be borne by contractor
5	Technical Procurement Specification (TPS) Whether indicative voyage time for one cycle can be indicated by FACT so as to ascertain manpower requirements?	Max 20 hrs
6	Technical Procurement Specification (TPS) Is Accommodation of personnel for PGTR will be under FACT scope or Bidders scope?	Accommodation of personnel for PGTR shall be borne by Contractor.
7	General Query Request to forward the pre-bid meeting minutes.	In Pre-bid meeting for Phosphoric acid barge following two parties had attended : 1) M/s Nautilus, Goa 2) M/s Wellington Maritime Services Both the parties have requested to extend the bidding time to minimum 4 weeks and delivery period to 12 months instead of 8 months.
8	Special Conditions of Contract (4.2.15) Please elaborate on assistance / service required from shipyard for First To& Fro voyage of the delivered barge with designated cargo	1) Provide assistance to barge Masters of FACT for navigation of barge during its first voyage 2) Provide assistance for loading and unloading of cargo during the first voyage. 3) Preparation of check list for various machineries/equipments in barge. Checking & confirming parameters as mentioned in check list during the first voyage. 4) Any breakdown of the barge during first voyage shall be attended by Party. All the maintenance and consumable cost associated with breakdown shall be borne by party