

ENQUIRY	Phone: +91 431 257 79 38 Fax : +91 431 252 07 19 Email : tvenkat@bheltry.co.in Web : www.bhel.com
NOTICE INVITING TENDER	

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	2621100128	13.07.2011	13.08.2011
<p>You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.</p> <p>Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.</p>			

Item	Description	Delivery Schedule	
		Quantity	Date
10	Supply, Erection and Commissioning of 1x13 KL Liquid Oxygen Storage Vessel with Fittings, Safety System etc and All Conforming to the Standards Mentioned as per Statutory Authorities Against Each Item on Establishing Facilities as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	1 No.	28.10.2011
20	Supply, Transportation, Erection and Commissioning of 1x13 KL Liquid Oxygen Vaporizer Unit with Pressure Regulating Station including Pipelines inside LOX Storage Yard for 1x13 KL LOX Storage Vessel at BHEL PPPU Thirumayam (Pudukkottai Dist) as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	1 No.	28.10.2011

Important points to be taken care during submission of offer

1. Checklist to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.
3. Offer shall be evaluated as a single package. Hence all items (Item Sl. No. 10 and 20) should be quoted without fail any, otherwise your offer will not be considered. However prices shall be quoted item wise only.

BHEL's General guidelines / instructions (refer MM/CE/GT/001) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2621100128".

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

Manager / Capital Equipment / MM

Maintenance & Services**Gas & services****Ref: BHE:M&S:Gas:****DESCRIPTION :** Liquid Oxygen Vaporizer Unit With Pressure Regulating Station

Scope: Supply, Transportation , Erection & Commissioning of Liquid Oxygen **Vaporizer Unit With Pressure Regulating Station** Including Pipelines Inside LOX Storage Yard For 1x13 KL LOX Storage Vessel At BHEL/Thirumayam , PPPU(Pudukkottai Dist.,)

Scope of supply for one set consists the following items .

Sl.No.	Description	BHEL Specification	Vendor's offer	Deviation if any, vendor to specify
1.0	LIQUID OXYGEN AMBIENT VAPORIZER UNIT			
1.1	Quantity	1 No.		
1.2	Type	AMBIENT, SS 304, FIN		
1.3	Duty	Continuous duty 24x7 Hrs		
1.4	Material	SS 304		
1.5	Capacity	500 Kg/Hr		
1.6	Inlet Temp	Vendor to specify		
1.7	Outlet temp	Vendor to specify		
1.8	Heating medium	Ambient		
1.9	Surface Area	Vendor to specify		
1.10	Working Pressure	17 Kg/cm ² (g)		
1.11	Design Pressure	Vendor to specify		
1.12	Hydrostatic Test Pressure	Vendor to specify		
1.13	Pneumatic Test Pressure	Vendor to specify		
1.14	Design Temperature	— 196 °C / 50 °C		
1.15	Design & Manufacturing code(ASME std to be used)	Vendor to specify		
2.0	PIPE LINES with in storage yard			
2.1	Quantity	1 Lot		
2.2	Pipes and fittings	The pipeline includes all the pipe fitting and pipe fittings such as Elbow, Tees Flanges, 'U' Clamp, Stud Nuts, Copper jumper, etc		
2.3	Material of Construction	A 312 SS 304		
2.4	Working Pressure	5 to 17 Kg/cm ² (g)		
2.5	Design Pressure	Vendor to specify		
2.6	Hydrostatic Testing Pressure	Vendor to specify		
3.0	PRESSURE REGULATING SYSTEM			
3.1	Quantity	1 Set.		
3.2	Inlet Pressure	17 Kg/cm ² (g)		
3.3	Outlet Pressure	5 TO 17 Kg/cm ² (g)		
3.4	Flow Rate	0 - 500 Kg/hr.		
3.5	Size	50 NB / Vendor to specify		
3.6	Ball Valve	50 NB / Vendor to specify		
3.7	Pressure Gauge	Vendor to specify , Make shall be Fiebig/wika/Bourden/Honey well		
3.8	POP Off Valve	Vendor to specify		
3.9	Make	Sensus/ Invensys/ Kromschoeder/ Fisher/ Honeywell or any other reputed make acceptable to BHEL		
4.0	SCOPE OF SUPPLY			
4.1	Liquid oxygen ambient vaporizer unit	1 No.		
4.2	Pipe lines with in storage yard	1 Lot		

Maintenance & Services**Gas & services**

4.3	Pressure Regulating System	1 set		
4.0	OVERALL DIMENSION			
4.1	Overall dimension(LXWXH)	Vendor to specify		
4.2	Inlet flange size	Vendor to specify		
4.3	Outlet flange size	Vendor to specify		
4.4	Empty weight(approx)	Vendor to specify		
5.0	QUALITY PLAN & DRAWINGS;			
5.1	Flow Scheme Drawing.	To be furnished along with offer		
5.2	GA Drawing	To be furnished along with offer		
5.3	Foundation Drawing.	To be furnished along with offer		
5.4	The Bidder should arrange Quality plan for each work and get approved by Engineer concern.	Vendor to Confirm		
6.5	The Bidder shall follow relevant ASME section for Liquid Oxygen vaporizer System	Vendor to Confirm		
6.6	The Bidder should furnish the maximum permissible evaporation losses , Liquid transfer losses of the proposed system.	Vendor to Confirm		
7.0	INSPECTION & TEST			
7.1	All test and inspection by	(a)All tests and inspections to be carried out under the control of third party . (b)List of CCOE approved third party inspecting agencies to be provided for BHEL approval		
7.2	Checking & approval of design and calculations	Vendor to Confirm		
7.3	Material inspection and stamp transferring separately	Vendor to Confirm		
7.4	Visual & dimensional inspection	Vendor to Confirm		
7.5	Hydrostatic test	Vendor to Confirm		
7.6	Pneumatic test	Vendor to Confirm		
7.10	Inspection of valves and fittings	Vendor to Confirm		
7.11	Any other inspection and test required	To be mentioned by offerer		
7.12	Inspection reports and test certificates.	The reports of the all tests & inspections with the inspection certificates to be submitted to BHEL after the completion of the inspections by third party inspecting agency.		
7.13	Hydro test report/certificate	Vendor to confirm		
7.14	safety valve manufacturer Test certificate	Vendor to confirm		
7.15	Regulator certificate	Vendor to confirm		
7.16	Inspection Reports by Third Party agency	Vendor to confirm		
8.0	GENERAL CONDITIONS			
8.1	STATUTORY REQUIREMENT	The Bidder should coordinate and obtain necessary clearance certificates with all Statutory bodies such as Explosives, Factory Inspectorate.etc., Charges on this account if any shall be indicated in the Price Bid separately & vendor to confirm.		
8.2	The Bidder should arrange G A Drawing, Quality plan , P & I diagrams for each work and get approved by BHEL Engineer concerned.	Vendor to Confirm		

Maintenance & Services**Gas & services**

8.3	The Bidder should arrange for obtaining foundation construction approval CCOE / Nagpur .Selection , Inspection & despatch of material , Inspection / certification under Rule 33, Application and obtaining licences from C C O E / Nagpur , Inspection of Plant by Department of Explosive, Endorsement , Supply of documentation for the plant, Obtaining safety certificate from the competent authorities on completion of installation with in the licensed area , Training of our personnel in operation and maintenance are scope of the Bidder.	Vendor to Confirm		
8.4	Approval for manufacturing of LOX vaporizer unit	Copy of approval certificate issued by CCOE for manufacturing of LOX bullet with Fittings to be enclosed		
8.5	Design approval	Design / Drawing approval for manufacturing & complete installation of LOX vaporizer unit , from CCOE / Nagpur & Local CCOE to be obtaining .		
9.0	SAFE CUSTODY & PRESERVATION OF COMPONENTS			
9.1	The safe custody of vaporizer system till commissioned and handed over will also under the scope of the contractor	Vendor to Confirm		
9.2	It is the responsibility of the supplier to apply touch up painting on all equipment before erection at his cost .	Vendor to Confirm		
9.3	Preservation of all equipment at all stages of handling, transporting to site of work or Pre Assy Yard , Pre - Assembly Erection, Testing, Commissioning , and till the unit is handed over to BHEL for regular operation.	Vendor to Confirm		
10	VENDOR'S BRIEF SCOPE OF SUPPLY	The Bidder should coordinate and obtain necessary clearance certificates with all Statutory bodies such Explosives, Factory Inspectorate.etc., Charges on this account if any shall be indicated in the Price Bid separately in favour of BHEL.		
10.1	Supply, Installation and Commissioning of the entire system (i.e vaporizer with regulating station as mentioned above specification) as per CCOE Norms and to Customer's Satisfaction.	Vendor to Confirm		
10.2	Scope restricted to Inside LOX Yard	Vendor to Confirm		
10.3	Providing all Technical Help required related to LOX Installation.	Vendor to Confirm		
10.4	Providing all related Drawings like P & I (Process & Instrumentation) and Layout Drawing, Complete Civil Drawings.	Vendor to Confirm		
10.5	Complete Initial Drawings Approval from CCOE (Chief Controller of explosives – Nagpur) for setting at BHEL,Thirumayam.	Vendor to Confirm		

Maintenance & Services**Gas & services**

10.6	Complete 3rd Party Inspection for acquiring Rule for fabrication & installation of entire LOX vaporizer & fittings.	Vendor to Confirm		
10.7	Obtaining Final License from CCOE – Nagpur towards the Installation.	Vendor to Confirm		
10.8	Endorsement of the CCOE License from Local CCOE office.	Vendor to Confirm		
10.9	Training of operation & maintenance staff of LOX facilities.	Vendor to Confirm		
10.10	Providing complete Guarantee Certificates / Product Manuals and Tank History file for project in 4 sets. (1 Original + 3 Xerox copy)	Vendor to Confirm		
10.11	Required consumables like cutting gases, welding electrodes for installation purposes .	Vendor to Confirm		
10.12	The crane facility required for unloading & installation of LOX SYSTEM at site	Vendor to Confirm		
10.13	From single point power source (Panel board) to all concerned Electrical items	Vendor to Confirm		
10.14	All electrical items shall be flameproof.	Vendor to Confirm		
10.15	Bidders shall deploy complete set of Tools & Plant for Erection, Testing Commissioning, and Hand over of the liquid LPG storage facility installation for regular operation.	Vendor to Confirm		
10.16	Fire fighting Equipments	Vendors to specify		
10.17	Spares required for two years for trouble free operation .	Vendors to specify		
11.0	BHEL SCOPE OF SUPPLY	Vendor to Confirm		
11.1	All civil work involved inside LOX Yard which includes Civil Pedestals for Tanks, Vaporizer Systems etc. will be carried out by BHEL for the entire Project and the required drawings details will have to be furnished by the Supplier to BHEL along with the offer or within two weeks of Purchase Order. The civil drawing should indicate the dynamic loading or foundation details of the vessel foundation drawing. 4 Set of GA drawing with foundation details are needed.	Vendor to Confirm		
11.2	Providing single point Power source (Panel Board) for installation.	Vendor to Confirm		
11.3	Explosive Fees towards Drawing Approval and towards Final License Fees for 3 years as applicable.	Vendor to Confirm		
11.4	Local NOC from District Magistrate from the date of receipt of Drawings Approval.	Vendor to Confirm		
12.0	PRE-DISPATCH INSPECTION AT SUPPLIERS WORKS	LOX vaporizer with regulating station Shall be offered to BHEL Engineers at supplier's works for Pre-dispatch inspection.		
	PROVE OUT AND ACCEPTANCE	After LOX bullet & their facilities have been installed & energized , demonstrations to be carried out for good working condition &		

Maintenance & Services**Gas & services**

13.0		ensuring operating parameters as per technical specification mentioned above.		
14.0	WARRANTY	warranty for products against defective materials and workmanship for a period of 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier		
15.0	DETAILED SCOPE OF SUPPLY	Detailed scope of supply like Item wise Description ,Qty, Make to be submitted along with offer.		
16.0	Delivery schedule for supply of LOX vaporizer and Pressure regulating station .	Three months from the date of issue of purchase order		
17.0	Erection, Testing & Commissioning	15 days from the date of receipt of Materials at site.		

Maintenance & Services**Gas & services****Ref: BHE:M&S:Gas:**

ITEM DESCRIPTION: SUPPLY,TRANSPORTATION , ERECTION & COMMISSIONING-INCLUDING CCOE APPROVAL FOR 1X13 KL with 17 kg/Cm² LOX STORAGE VESSEL AT BHEL/Thirumayam, PPPU(Pudukkottai Distt.,) .

Sl.No	Description	BHEL Specification	Vendor's Offer	Deviation If any, vendor to be filled
1.0	NAME OF WORK	Supply , Erection & Commissioning for 1 X 13 KL Liquid Oxygen Storage Vessel With Fittings, Safety System , Etc. All Conforming To The Standards Mentioned As Per Statutorily Authorities Against Each Item On Establishing Facilities		
2.0	BRIEF DESCRIPTION OF WORK	M/s. BHEL /Thirumayam,PPPU(Pudukkottai Dist.,) has proposed to set up 1 x 13 KL LOX storage facility in the premises of BHEL Thirumayam to meet day to day oxygen gas requirement at a pressure of 5 to maximum 17 Kg/sq.cm with required valves, fittings, gauges, vents, drains as per the requirement of statutory authority and for the operational & maintenance convenient.		
3.0	SCOPE OF SUPPLY			
3.a	LOX STORAGE VESSEL with FITTINGS.	Quantity : 1 Set Consists of following items as per Sl. No. 3.a1 & 3.a2		
3.a1	LOX STORAGE VESSEL with FITTINGS.	1 No.		
3.a2	Foundation Bolts ,Washers & Nuts	1 Lot		
3.1.0	STORAGE VESSEL			
3.1.1	TYPE	Vertical, Cylindrical, Double Wall, Vacuum + Perlite Insulation		
3.1.2	Net Liquid Oxygen Storage Capacity	13 KL		
3.1.3	Gross volume	Vendor to specify		
3.1.4	Fluid	Liquid Oxygen		
3.1.5	Working Pressure	17 Kg/Cm ² (g)		
3.1.6	Design Code	ASME Design to be followed and Vendor to specify		
3.2.0	INNER VESSEL			
3.2.1	Material specification (Stainless steel)	Vendor to specify		
3.2.2	Gross volume of Inner Vessel	Vendor to specify		
3.2.3	Net Liquid Storage Capacity	Vendor to specify		
3.2.4	Design & Manufacturing Code	Vendor to specify		
3.2.5	Max. Allowable Working	Vendor to specify		

Maintenance & Services**Gas & services**

	Pressure			
3.2.6	Design Pressure (Corrected For Vacuum)	Vendor to specify		
3.2.7	Hydrostatic Test pressure	Vendor to specify		
3.2.8	Design Temperature	Vendor to specify		
3.2.9	Max .Withdrawal Flow Rate	Vendor to specify		
3.2.10	Radiographic Control	100 % X-Ray For Inner Tank		
3.2.11	Insulation	Fine Grain Perlite + Vacuum		
3.2.12	Vacuum Value	Vendor to specify		
3.4	OUTER VESSEL			
3.4.1	Material specification (Carbon steel)	Vendor to specify		
3.4.2	Design Code	Vendor to specify		
3.4.3	Operating Pressure	Vendor to specify		
3.4.4	Design Pressure	Vendor to specify		
3.4.5	Hydrostatic Test pressure	Vendor to specify		
3.4.5	Design & Manufacturing Code	Vendor to specify		
3.5	VALVES AND FITTINGS			
3.5.1	Lower filling valve	Vendor to specify		
3.5.2	Upper filling valve	Vendor to specify		
3.5.3	Pressurizing valve	Vendor to specify		
3.5.4	Liquid delivery valve	Vendor to specify		
3.5.4	Stop valve (Pressurizer)	Vendor to specify		
3.5.5	Flow divertor valve	Vendor to specify		
3.5.6	Gas blow valve	Vendor to specify		
3.5.7	Liquid level detect valve	Vendor to specify		
3.5.8	Liquid charging line blow valve	Vendor to specify		
3.5.9	Inlet check valve	Vendor to specify		
3.5.10	Cryoregulator (combined function) consists of following component (a to d)	Vendor to specify		
	a) Pressure build-up regulator	Vendor to specify		
	b) Non return valve	Vendor to specify		
	c) Economizer	Vendor to specify		
	d) Safety relief system	Vendor to specify		
3.5.11	Safety valves for inner vessel (2Nos.)	Vendor to specify		
3.5.12	Safety valve for pipe line	Vendor to specify		
3.5.13	Level gauge valves (2Nos.)	Vendor to specify		
3.5.14	Pressure balance valve	Vendor to specify		
3.5.14	Level gauge	Vendor to specify		
3.5.15	Pressure gauge	Vendor to specify		
3.5.16	Vacuum probe valve	Vendor to specify		
3.5.17	Evacuation port	Vendor to specify		
3.5.18	Auxiliary liquid valve	Vendor to specify		
3.5.19	Auxiliary gas valve	Vendor to specify		
3.5.20	Rupture discs (2Nos.)	Vendor to specify		
3.5.21	Safety device for outer vessel (Lift off plate)	Vendor to specify		
3.5.22	Filling joint (Flange SORF, ANSI B16.5, 300#)	Vendor to specify		
3.5.23	Pressure build-up coil (SS 304	Vendor to specify		

Maintenance & Services**Gas & services**

	fin tube)			
3.5.17	Mfg Std & MOC for all valves	All valves shall be SS materials & vendor to specify Mfg Std & MOC		
4.0	OVERALL DIMENSION OF VESSEL			
4.1	Outside Diameter	Vendor to specify		
4.2	Overall Height	Vendor to specify		
5.0	WEIGHT of LOX VESSEL & FITTINGS			
5.1	Empty Weight [Approx]	Vendor to specify		
5.2	Full Weight(Approx) With Oxygen	Vendor to specify		
6.0	WELDING PROCESS:	Vendor to specify		
6.0	QUALITY PLAN & DRAWINGS;			
6.1	Flow Scheme Drawing.	To be furnished along with offer		
6.2	GA Drawing	To be furnished along with offer		
6.3	Foundation Drawing.	To be furnished along with offer		
6.4	The Bidder should arrange Quality plan for each work and get approved by Engineer concern.	Vendor to Confirm		
6.5	The Bidder shall follow relevant ASME section for Liquid Oxygen Storage System	Vendor to Confirm		
6.6	The Bidder should guarantee full capacity of Liquid Oxygen in the filled condition.	Vendor to Confirm		
6.7	The Bidder should furnish the maximum permissible evaporation losses , Liquid transfer losses of the proposed system.	Vendor to Confirm		
7.0	INSPECTION & TEST			
7.1	All test and inspection by	(a)All tests and inspections to be carried out under the control of third party . (b)List of CCOE approved third party inspecting agencies to be provided for BHEL approval		
7.2	Checking & approval of design and calculations	Vendor to Confirm		
7.3	Material inspection and stamp transferring separately	Vendor to Confirm		
7.4	Visual & dimensional inspection	Vendor to Confirm		
7.5	Plate orientation	Vendor to Confirm		
7.6	Radiographic control	Vendor to Confirm		
7.7	Hydrostatic test	Vendor to Confirm		
7.8	Vacuum test	Vendor to Confirm		
7.9	Inspection of valves and fittings	Vendor to Confirm		
7.10	Any other inspection and test required	To be mentioned by offerer		
7.11	Inspection reports and test	The reports of the all tests &		

Maintenance & Services**Gas & services**

	certificates.	inspections with the inspection certificates of the tank to be submitted to BHEL after the completion of the tank & the inspections by third party inspecting agency .		
7.12	Hydro test report/certificate of inner vessel	Vendor to confirm		
7.13	Calibration chart	Vendor to confirm		
7.14	safety valve manufacturer Test certificate	Vendor to confirm		
7.15	Burst disc certificate	Vendor to confirm		
7.16	Test certificate for pressure building coil	Vendor to confirm		
7.17	Valves certificates	Vendor to confirm		
7.18	Regulator certificate	Vendor to confirm		
7.19	Component certificates(test & calibration certificates) (DP gauge & Pr.Gauge)	Vendor to confirm		
7.20	Fitting test certificate(Thermal relief valve)TRV, Needle Valve ,Flow Divertor)	Vendor to confirm		
7.21	LRS/BVS Report stamp transfer (Lloyd's Register of shipping/ bureau Veritas Industrial services)	Vendor to confirm		
7.22	Vacuum sealing & retention report (for Evacuated container).	Vendor to confirm		
7.23	Material identification report-inner vessel (inner shell, dish end, Nozzles, inner pipes)	Vendor to confirm		
7.17	Material identification report-outer vessel	Vendor to confirm		
7.25	Radiography chart for inner vessel	Vendor to confirm		
7.26	Radiography chart for outer vessel	Vendor to confirm		
7.27	Performance test for NER/ cold spot /pressure test of vessel report(whichever applicable)	Vendor to confirm		
7.28	MSLD Report of outer vessel	Vendor to confirm		
7.29	MSLD Report of inner vessel (Value of std leak, acceptable leak rate, leak rate observed, vacuum level in vessel etc0	Vendor to confirm		
7.30	UV Test report for cleanliness	Vendor to confirm		
7.31	Stage inspection report – inner (Nozzle& weld set up)	Vendor to confirm		
7.32	Stage inspection report – outer (Nozzle& weld set up)	Vendor to confirm		

Maintenance & Services**Gas & services**

7.33	Heat treatment report for applicable items	Vendor to confirm		
7.34	UV Test certificates for inner surface of inner vessel including baffles/stiffner & ppg)	Vendor to confirm		
7.35	Inspection Reports by Third Party agency	Vendor to confirm		
8.0	CLEANING& PAINTING:			
8.1	Outer Vessel	Before painting for outer tank, the tank to be sand blasted with sa 2,5 quality. Primer coat & polyurethane based white top coat to be applied providing a total thickness of minimum 120 microns.		
8.2	Inner Vessel	Inner tank cleaning to be done according AMSE std & vendor to specify.		
9.0	GENERAL CONDITIONS			
9.1	As built process & instrumentation diagram.	Vendor to confirm		
9.1	Do's & Dont' s	Vendor to confirm		
9.2	Material safety data sheet	Vendor to confirm		
9.3	Std operating procedure for warm filling	Vendor to confirm		
9.4	Std operating procedure for cryogenic storage vessel.	Vendor to confirm		
9.5	Liquid level Gauge calibration certificate & chart.	Vendor to confirm		
9.6	Volume equivalent chart.	Vendor to confirm		
9.7	Physical security arrangement.	Vendor to confirm		
9.8	Tank test certificate.	Vendor to confirm		
9.9	Emergency contact.	Vendor to confirm		
9.10	Tank document	Vendor to confirm		
9.11	STATUTORY REQUIREMENT	The Bidder should coordinate and obtain necessary clearance certificates with all Statutory bodies such as Explosives, Factory Inspectorate.etc., Charges on this account if any shall be indicated in the Price Bid separately & vendor to confirm.		
9.12	Bidder shall be in a position to design all Mechanical ,Electrical & Instrumentation equipment in the Liquefied Petroleum gas storage facilities . The Bidder shall take into consideration of all anchors parts , pipe lines, Excess flow valves, safety valves , isolation valves , regulating valves , line blinds, fittings and other	Vendor to Confirm		

Maintenance & Services**Gas & services**

	miscellaneous equipment for the system to be in complete respect. The Bidder shall practice the most modern design and technology for the proposed system. The Bidder has to furnish general arrangement drawing with main components inner details such as storage tank , inner technical details including materials, Surface area ,etc.,			
9.13	The Bidder should arrange G A Drawing, Quality plan , P & I diagrams for each work and get approved by BHEL Engineer concerned. All the drawings shall be submitted in 3D form also.	Vendor to Confirm		
9.14	The Bidder should arrange for tank foundation obtaining construction approval CCOE / Nagpur .Selection , Inspection & despatch of material , Inspection / certification under Rule 33, Application and obtaining licences from C C O E / Nagpur , Inspection of Plant by Department of Explosive, Endorsement , Supply of documentation for the plant, Obtaining safety certificate from the competent authorities on completion of installation with in the licensed area , Training of our personnel in operation and maintenance are scope of the Bidder.	Vendor to Confirm		
9.15	Approval for manufacturing of LOX bullet with Fittings	Copy of approval certificate issued by CCOE for manufacturing of LOX bullet with Fittings to be enclosed		
9.16	Design approval	Design / Drawing approval for manufacturing & complete installation of LOX bullet with fittings , from CCOE / Nagpur & Local CCOE to be obtaining .		
10.0	SAFE CUSTODY & PRESERVATION OF COMPONENTS			
10.1	The safe custody of storage vessel till commissioned and handed over will also under the scope of the contractor	Vendor to Confirm		
10.2	It is the responsibility of the supplier to apply touch up painting on all equipment	Vendor to Confirm		

Maintenance & Services**Gas & services**

	before erection at his cost .			
10.3	Preservation of all equipment at all stages of handling, transporting to site of work or Pre Assy Yard , Pre - Assembly Erection, Testing, Commissioning , and till the unit is handed over to BHEL for regular operation.	Vendor to Confirm		
11.0	VENDOR'S BRIEF SCOPE OF SUPPLY	The Bidder should coordinate and obtain necessary clearance certificates with all Statutory bodies such Explosives, Factory Inspectorate.etc., Charges on this account if any shall be indicated in the Price Bid separately in favour of BHEL.		
11.1	Supply, Installation and Commissioning of the entire system (as mentioned above specification) as per CCOE Norms and to Customer's Satisfaction.	Vendor to Confirm		
11.2	Scope restricted to Inside LOX Yard excluding vaporizer unit	Vendor to Confirm		
11.3	Providing all Technical Help required related to LOX Installation.	Vendor to Confirm		
11.4	Providing all related Drawings like P & I (Process & Instrumentation) and Layout Drawing, Complete Civil Drawings.	Vendor to Confirm		
11.5	Complete Initial Drawings Approval from CCOE (Chief Controller of explosives – Nagpur) to set at BHEL/Thirumayam.	Vendor to Confirm		
11.6	Complete 3rd Party Inspection for acquiring Rule for fabrication & installation of entire LOX Bullet& fittings.	Vendor to Confirm		
11.7	Obtaining Final License from CCOE – Nagpur towards the Installation.	Vendor to Confirm		
11.8	Endorsement of the CCOE License from Local CCOE office.	Vendor to Confirm		
11.9	Training of operation & maintenance staff of LOX facilities.	Vendor to Confirm		
11.10	Providing complete Guarantee Certificates /	Vendor to Confirm		

Maintenance & Services**Gas & services**

	Product Manuals and Tank History file for project in 4 sets. (1 Original + 3 Xerox copy)			
11.11	Required consumables like cutting gases, welding electrodes for installation purposes .	Vendor to Confirm		
11.12	The crane facility required for unloading & installation of LOX SYSTEM at site	Vendor to Confirm		
11.13	From single point power source (Panel board) to all concerned Electrical items	Vendor to Confirm		
11.14	All electrical items shall be flameproof.	Vendor to Confirm		
11.15	Bidders shall deploy complete set of Tools & Plant for Erection, Testing Commissioning, and Hand over of the liquid LPG storage facility installation for regular operation.	Vendor to Confirm		
11.16	Fire fighting Equipments	Vendors to specify		
12.0	BHEL SCOPE OF SUPPLY	Vendor to Confirm		
12.1	All civil work involved inside LOX Yard which includes Civil Pedestals for Tanks, Vaporizer Systems etc. will be carried out by BHEL for the entire Project and the required drawings details will have to be furnished by the Supplier to BHEL along with the offer or within two weeks of Purchase Order. The civil drawing should indicate the dynamic loading or foundation details of the vessel foundation drawing. 4 Set of GA drawing with foundation details are needed.	Vendor to Confirm		
12.2	Providing single point Power source (Panel Board) for installation.	Vendor to Confirm		
12.3	Explosive Fees towards Drawing Approval and towards Final License Fees for 3 years as applicable.	Vendor to Confirm		
12.4	Local NOC from District Magistrate from the date of receipt of Drawings Approval.	Vendor to Confirm		
13.0	PRE-DISPATCH INSPECTION	LOX BULLET with FITTINGS Shall be		

Maintenance & Services**Gas & services**

	AT SUPPLIERS WORKS	offered to BHEL Engineers at supplier's works for Pre-dispatch inspection.		
14.0	PROVE OUT AND ACCEPTANCE	After LOX bullet & their facilities have been installed & energized , demonstrations to be carried out for good working condition & ensuring operating parameters as per technical specification mentioned above.		
15.0	WARRANTY	warranty for products against defective materials and workmanship for a period of 12 months from the date of commissioning or 18 months from the date of despatch whichever is earlier		
16.0	DETAILED SCOPE OF SUPPLY	Detailed scope of supply like Item wise Description ,Qty, Make to be submitted along with offer.		
17.0	Delivery schedule for supply of LOX vessel with fittings .	Three months from the date of issue of purchase order		
18.0	Erection, Testing & Commissioning	15 days from the date of receipt of Materials at site.		