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#### **OIL INDIA LIMITED**

(A Govt. Of India Enterprise) Tel :033 2230 1657, 1658 4, India Exchange Place, Fax :91 33 2230 2596 Kolkata-700001 E-mail :oilcalmn@oilindia.in

Tender No. & Date: KID9835L16/03 07.01.2016

Bid Security Amount : INR 0.00 OR USD 0.00

(or equivalent Amount in any currency)

Bidding Type : Single Bid (Composite Bid)

Bid Closing On : 16.02.2016 at 14:00 hrs. (IST) Bid Opening On : 16.02.2016 at 14:00 hrs. (IST)

Performance Guarantee: Not Applicable

OIL INDIA LIMITED invites Limited tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000235	Inline Water Test Bath for 14.2 and 19 Kg LPG Cylinders for LPG Filling Plant, Duliajan.	1	NO
	A) General requirements:  Item shall be designed for  I) The inline water test bath shall detect leakage in the filled LPG cylinders up to the bung level, while the cylinders are submerged in the test bath. The equipment shall be mounted online the chain conveyor system by which all the cylinders shall be passed through the test bath and checked for leakage.  II) The test bath shall be consisting of a gravity track at the inlet and a chain conveyor at the exit which forms a integral part of the test bath. The test bath shall be equipped with an independent drive unit which drives the take off conveyor in the test bath.  III) Guides are to be provided for supporting the cylinders on the side.  IV) The guides shall be designed in such a way that the equipment can handle cylinders of 14.2 Kg and 19 Kgs.  V) Inline Water Test Bath for 14.2 and 19 Kg LPG Cylinders for LPG Filling Plant shall be fit to the existing pit of size(Length:7800mm Breath:1000mm Height:760mm). Drawing enclosed.  VI) The Inline Water Test Bath should be design and installed in such a way that it should be suitable with the existing system in the LPG Filling Plant.  VII) The trough of the test bath shall be fabricated out of the MS sheets with suitable stiffeners provided for rigidity. The ends of the cylinders shall be by gravity and the exit of the cylinders shall be by means of a chain conveyor.  B) Technical Specifications:  Inline Water Test Bath For 14.2/19 Kg LPG Cylinders:  1. Leak Detection  a. Residence time per cylinder-Minimum 5 sec with compatible speed of chain conveyor.  b. View-No cross member or support should obstruct the view especially that of Bung.  2. Water  a. Maximum water level-		
	Adjustable overflow outlet to prevent immersion of valve body.		

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Item No./ Mat. Code	Material Description	Quantity	UOM
	b. Minimum water level-		
	Bung top to be immersed fully, float sensor to pneumatically actuate		
	stoppage of cylinder movement if at low level.		
	c. Drainage		
	Outlet at the bottom surface of sump opposite to operator's work		
	station. Uniform and sufficient slope from both ends towards centre. Opening		
	should be flange door type with rubber gasket, to be opened by a single level		
	arrangement.		
	Dual Cylinder Handling Capacity		
	a. Multiple cylinder type-		
	Ability to accept 14.2 Kg and 19 Kg cylinder irrespective of any		
	sequence.		
	b. Switch over type-		
	Nil and without any manual intervention.		
	4. Movement		
	a. Auto control		
	Pneumatic control with stopper at the inlet		
	b. Inlet		
	Gravity feed with removable wearing plate or channels bolted to		
	bottom		
	c. Emergency shut off-		
	To be provided at operator work station.		
	d. Outlet chain conveyor & drive		
	Two/four track chain conveyor		
	e. Drive unit & drive section:		
	Shall be integral part of the test bath		
	5. Dimensions		
	a. Lenth:7720mm		
	b. Width:700mm(Minimum)		
	c. Depth:1100mm		
	d. Testing zone length:1000mm(Minimum)		
	e. Effective length installation:7720mm(approx)		
	f. Sheet thickness: Min. 5.0 mm for both bottom & sides		
	g. Stiffness at periphery:80 x 80 x 6mm MS angle		
	h. Bath supports		
	(i) Minimum 2 Nos column support running width wise below the		
	bath. (ii) Minimum 2 Nos Vertical support at both ends of bath.		
	6. Maintainability		
	a. Accessibility-		
	Dismantling of any structural member should not be required to		
	remove any shaft/sprocket assembly for maintenance.		
	b. Replacement-		
	All internal assemblies to be suspended eliminating anchor welding	,	
	and cross members. Fittings shall be bolted.	'	
	c. Protrusions-		
	No protrusions to tap water/sludge at the bottom.		
	7. Workmanship		
	a. Welding-		
	Smooth, free of slag & welding splatter.		
	b. Painting internal-		
	Sandblast to SA 2.5 according to SIS 055900. Two coats of Epoxy		
	primer plus three coats of white Epoxy paint. Final coat of Epoxy paint to be		
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Item No./ Mat. Code	Material Description	Quantity	UOM
	done after installation.		
	8. Working capacity & rating		
	1200 Cylinder/Hr and continuous.		
	9. Pneumatic panel box of sheet metal of 1.6mm thickness for mounting of		
	pneumatics inside the panel. The panel shall have a provision of key/lock and		
	the pneumatic circuit diagram etched/painting on the inside of the panel door.		
	The levers/switches provided on the pneumatic panel box shall be marked		
	with riveted metallic labels.		
	10. ½"FRL with ½" ball valve on air pipeline.		
	11. Successful vendor to advice, finalize the size of water bath to Oil India Ltd		
	to get fit with the existing pit.		
	12. Isolation gate valve on the water inlet shall be provided at the water test		
	bath by the successful vendor.		
	13. Earthing of push button/drive unit shall be done at two places and to the		
	conveyor earthing strip with 3 mm braided copper wire with proper v size		
	thimbles.		
	14. Vendor to ensure that there is no toppling of cylinders within the test bath		
	when full stream of filled cylinders are available at the Test Bath.		
	15. The unit should operate at minimum air pressure of 4 Kg/cm2.		
	16. Component Requirement:		
	A) Idle sprocket & shaft		
	B) Drive sprocket & shaft		
	C) Worm Reduction Gear Type Drive Unit		
	D) Conveyor chain		
	E) Motor Unit		
	F) Push Button Station		
	G) Pneumatic stopper		
	A) Idle sprockets & Shafts:		
	<ol> <li>Functional requirements:</li> <li>a)Item shall be designed to work with the chain as</li> </ol>		
	specified		
	b)Materials for shaft and bush should be suitable for		
	Water+Soap duty		
	2. Component Material Requirement		
	a)Type: Double contoured tooth form/Flat faced sprockets.		
	b)Sprockets: malleable cast iron or SG iron.		
	c)Idler shaft:EN-8		
	d)Idler Bush: Shall be polyethylene or phosphorous bronze		
	with anti static property.		
	e)Soap solution tray for idler sprocket: Suitable GI tray		
	with drain plug(1.5")made out of 1.5mm thick sheet.		
	3. Dimension Requirement		
	a)Bore diameter:40mm Nominal		
	b)Sprocket O.D.:175mm nominal		
	c)No. of teeth for idler sprocket:8 Nos		
	Hardness Requirement:		
	a)Idler body:85 Rockwell B(Min)		
	b)Shaft:85 Rockwell B(Min)		
	B) Drive Sprockets & Shaft:		
	1. Type		
	a)Double contoured tooth form		
	2. Functional Requirements		
	a)Sprockets shall be designed to work with conveyor chain		

Item No./ Mat. Code	Material Description	Quantity	UOM
Wat. Code	as specified		
	Component Material requirement		
	a)Sprocket: Malleable cast Iron or SG iron		
	b)Drive shaft: EN-8		
	c)Key :Medium Carbon Steel (Carbon:0.35-0.45)		
	4. Dimension Requirement		
	a)Bore diameter: 50mm Nominal		
	b)Sprocket OD:300mm Nominal		
	c)Key Size:16 x 16 Sq		
	d)No of teeth:15		
	5. Hardness Requirement		
	a)Sprocket & Key:85 Rockwell(Min)		
	6. Special Requirements		
	a)Sprocket tooth form shall be suitably double contoured		
	to permit use in both unidirectional & reversible		
	conveyors.		
	b)Sprocket shall have an integral hub with reinforcement		
	at the keyway.		
	c)Keyway corner shall be relieved to reduce stress		
	concentration.		
	d)Radial reinforcing ribs to be provided teeth corners		
	shall be chamfered to prevent sagging to chain		
	C)Worm Reduction Gear Type Drive Unit		
	FLP Motor with FLP Glands & Flange Mounting		
	HP-3 HP		
	2. Reduction Gear Box		
	a) Make: Elecon, Radicon or Greaves		
	b) Ratio:60:1" for 3 HP		
	c) Rating: Input Speed - utilised 1420 RPM		
	Drive Reduction Chain		
	a)Make: Diamond/Rolon		
	b)Type: Duplex chain with 1" pitch		
	c)Sprocket: Duplex type chain Sprocket (No.of Teeth		
	according to conveyor speed requirement)		
	Drive Unit Base Frame		
	a)Channel for frame: ISMC 100. Channel will have minimum		
	6 Nos holes for M 16 bolts for fixing the base plate to the channel.		
	b)Base Plate size : 10 mm thick (min)		
	c)Channel will have slotted holes to adjust the		
	slackness of the transmission chain by easily moving the base plate		
	with the simple rotation of hexagonal nut.		
	d)Grouting bolts will be connected to each other by		
	cross members while grouting.		
	5. Tensioning Arrangement		
	a)To be provided in order to adjust the conveyor chain		
	slack.		
	6. Alignment of Drive Unit & Gear box		
	a)The successful vendor will ensure proper alignment of		
	gear box & motor. Same shall be checked with feeler gauge to		
	maintain the limits as specified.		
	D)Conveyor Chain:		
	1 .Type		

Item No./ Mat. Code	Material Description	Quantity	UOM
	a)Fabricated cranked link bush chain with bowing ability suitable for LPG Cylinder carrying conveyor system. Link to be easily detachable.		
	Component material Requirements     a)LEAF: Medium Carbon Steel conforming to EN-8(Heat		
	Treated). b)Bush:Medium Carbon steel conforming to EN-8(Heat		
	Treated) c)PIN:High tensile Ni-Co-Mo alloy steel		
	3. Component Size Requirements: a)LEAF size 32x6mm(+0.1mm to-0.2mm) b)Chain pitch:63.5mm c)Chain Height:32mm, Width:42mm+1		
	d)Minimum breaking strength per strand: 5500KGF,Breaking strength shall be ascertained for each 200meter lot of chain		
	by extracting a random sample(minimum five link long) and subjecting it to the force requirement above. If no cracking or breaking occurs the lot shall be deemed to have passed the test. However, it is binding on the vendor to find out the breaking load till the chain breaks. The same should be mentioned in Test Certificate.		
	Direction for Movement: Forward  E)Motor Unit:		
	Totally enclosed fan cooled squirrel cage FLAMEPROOF induction motor, enclosure conforming to protection IP55, Horizontal foot mounted (B3) continuously rated (S1) suitable for operation on 415 V+/-6%, 3 phase, 50 +/-3% Hz, AC supply with 450 C Ambient, class F insulation with temperature rise limited to class B and altitude less than 1000 m MSL, conforming to IS 2148.		
	Motors shall be certified by CMRI and approved by DGMS (India) for operation in Hazardous Area Zone 1 and Zone 2, Gas groups IIA and IIB of		
	oil mines. FLP Start-Stop Push Button Station shall be supplied with the Motor.  Motor specifications		
	Rated voltage: 415 V +/- 6%, 3 phase, Delta connected HP/KW: As per design of Gearbox. Frequency: 50 Hz +/- 3%		
	RPM : To match driven Load Insulation class : F, temperature rise limited to class B Protection : IP 55		
	Standards : IS 2148 and IS 325 Rating : Continuously rated		
	Painting : Epoxy grey Terminal box : Suitable for use in oil and gas mines (NOT FOR UNDER GROUND COAL MINES) fitted with double compression FLP		
	cable gland. Gland shall be supplied with the motor. Size of gland shall be 3/4" ET, suitable for EPR insulated screened cable with OD 19 mm.  Terminal Box to be suitably located at the top of the Motor.		
	Earthing : 1 (one)no. inside terminal box and 2 (two) nos. on the body of the Motor.		
	Lifting Eye: One no. lifting hook shall be provided for lifting the motor.  DGMS Approval: A plate bearing DGMS approval no. and DGMS		

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Item No./ Mat. Code	Material Description	Quantity	UOM
Wat. Codo	logo shall be riveted on the motor body.		
	F.FLP Start # Stop Push Button Station Specification		
	Special notes:		
	Motors and PB Station shall be procured from manufacturers or their authorized dealers only.     The following certificates shall be submitted along with the quotation, otherwise offer will not be considered:     i)Authorized dealers must submit valid authorization		
	certificate ii) Copies of DGMS approval letters and CMRI certificates		
	3. The following certificates shall be submitted along with supply:  i)Manufacturer's test certificates (both type and routine test)  ii)Motors and PB Station shall be guaranteed for 1 (one) year and a guarantee certificate to that effect.  4.Test certificates and guarantee certificates shall be duly signed		
	by the supplier.		
	5.Materials shall be adequately packed to avoid ingress of moisture and transit damage.		
	G.Pneumatic Stopper:  1. Functional requirement- This pneumatic stopper shall be designed to stop a stream of cylinders on the conveyor. Stoppage shall be through pneumatically actuated arms which move inward to obstruct the cylinder flow & stopper on the other hand to prevent bulging of the railing. Actuation shall be done through a pneumatic sensor.  2. Other requirement		

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a) Pneumatic circuit & components shall conform as specified. b) Teflon wear pads of min. Horm thik. Of contact surface and installed with counter sunk screw. c) The unit shall be grouted to the steel reinforcement mesh of RCC. d) The unit shall operate satisfactory at 4.5Kg/Cm2 in air pressure. 3. Inspection to be offered to OIL's approved Third Party inspection agencies. a) Certificate of conformity for pneumatic components such as pneumatic valves, FRL, cylinders, accessories, etc. to the make specified & our specifications prior to assembly shall be obtained from the third party inspection agency giving component wise details for each equipment, part no. of component (manufacture s), etc. Proof of direct purchase from the manufacture to be submitted to third party Inspection agency. b) All equipment shall be subjected to testing for functional requirements conformity prior to despatch by inspector. 4. General Requirements for Pneumatic Circuit & Components: a) General Requirements for Pneumatic Circuit & Components: All valves, cylinders, tubing and accessories shall be suitable for ambient conditions prevailing at site. b) Pneumatic Valves: This requirement cover all the valves used for control all valve used for control purposes in the circuit. i) Valves should be of corrosion resistant construction. ii) For valve with port sizes 1/8 inch and above all valve shall be provided with sintered brass exhaust silencers for silencing exhaust flow and prevent ingress of dust / dirt into the valves internals. c. Threads: This requirement covers all threaded pneumatic components used in equipment: i) Threads smaller than 1/8" SSP should be MS standard. Threaded parts shall be assembled with a Teflon thread specification. Threads smaller than 1/8" SSP should be MS standard. Threaded parts shall be assembled with a Teflon thread sealing passe. Hard setting thread sealing compound like M-seal, Epoxies shall not be used. iii) The use of Teflon tape or paste is not mandatory for components designed to work with hard PVC	Item No./ Mat. Code	Material Description	Quantity	UOM
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		brass or aluminium. When carbon steel fittings are used the same		

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Item No./ Mat. Code	Material Description	Quantity	UOM
man oodo	the equipment at one or more points to avoid vibrational damage and loosening.		
	vi) All tubing shall have numbered markers on them for identification and also marked on logic circuit diagram.  e. Filter Regulators:  i)All equipment shall be provided with an individual Air filter/pressure regulator/lubricator for the inlet air. These devises should be mounted on the equipment itself, preferably inside the control panel. A pressure gauge to monitor the regulated pressure is mandatory.		
	ii) The filter elements shall be of 50 micron or finer grain. <b>f. Control Panel:</b> i)Logic elements, supply FRL's & lever or button controls		
	shall as far as possible be located in a control panel.  ii)The main control panel shall have a key lock to prevent unauthorised opening.  iii) When pneumatic piping must pass through the panel walls a bulk-head connector must be used. Passing piping through		
	drilled or punched holes in the panel is not permitting.  iv) The panel enclosure shall be constructed of sheet steel of 1.60 mm min. thickness.  v)Circuit diagram shall be painted / etched / laminated		
	on the inside cover of the panel. <b>g. Pneumatic:</b> All pneumatics shall be suitable for (+) 50°C to (-) 5°C.		
	Installation & Commissioning		
20	INSTALLATION & COMMISSIONING SUPERVISION FOR INSTALLATION AND COMMISSIONING.	1	AU
	SCOPE OF WORK FOR INSTALLATION AND COMMISSIONING :		
	Supplier shall take full responsibility for carrying out the installation, testing and commissioning of the system to match with the requirement as mentioned in the quotation.		
	Relevant facilities and local manpower will be provided by OIL.  Special tools and other commissioning spares required for commissioning of the system within stipulated time, shall be brought by the supplier on returnable basis.  Schedule of installation and commissioning shall be submitted by the		
	supplier.  Supplier shall abide by all instructions of OIL Engineer and carry out standard quality jobs/works to satisfaction of OIL Engineer.  Safe and proper working procedure as per OISD Standard-105 and other		
	relevant standards shall have to be followed while carrying out jobs to ensure safety of personnel and equipment. Supplier shall ensure compliance of all safety and statutory rules and regulations.  To and fro charges are to be included in the offer.		
	Accommodation may be provided by OIL to the supplier's personnel on chargeable basis depending on availability.		

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- **Special Notes**: 1. Guarantee / Warranty certificate for one year will be required along with the supply.
  - 2. Validity of offer: 75 days from the date of tender opening. Offer with validity less than 75 days will be rejected.

#### Special terms and conditions:

- 1. The supplier shall go through the tender document carefully and understand fully. The supplier shall give utmost importance to quality of supplied items.
- 2. Bidders may inspect the site at their own cost to access the requirement of material required to install and commission the Inline Water Test Bath for 14.2 and 19 Kg LPG Cylinders system as per the tender specifications. Any item not spelt out but required for completion of the job is to be supplied. The bidder must specify the same in their offer.
- 3. The quote shall include packaging charge and net delivery at site, Duliajan, Assam.
- 4.In case of any damage caused to the components during transportation, supplier shall have to repair / replace the defective components at free of cost.
- 5.Inspection and Testing:-
- OIL's representatives shall carry out inspection and testing of the system at the premises of the manufacturer prior to despatch. All the procedures as per standard including complete Control & Instrumentation system designed by the supplier for safe & efficient operation of the system should be demonstrated to OIL engineers during pre-acceptance at Suppliers works. A minimum 15 days notice is required for the same prior to date of inspection. Travel, Boarding and lodging charges for the Inspection and Testing will be borne by M/s OIL.
- 6. Warranty: The Bidder should guarantee the trouble free performance of the supplied systems & work executed for a period of 12 months from the date of complete system being commissioned & handed over to M/S OIL or 18 months from the date of delivery, whichever is earlier. In case of any defect or nonperformance of the system or a component during this twelve months guarantee period the same will have to be replaced free of cost. Any damage or defect that may arise or lie undiscovered at the time of completion of job should be rectified or replaced by the Bidder at their own cost. The supplied system shall be accompanied by the guarantee bond from the supplier.
- 7.Documentation: The Bidder will have to supply 3 sets of as built drawings, operation & maintenance manuals along with the delivery of the items.
- 8. Supplier should submit the following along with the quotation:-
- a) All the relevant designed drawings.
- b) Bill of materials of whole system along with all accessories with manufacturer's name, catalogue no. and detailed catalogue of the offered items.
- 9.Installation details: -
- Supplier shall submit detailed specifications and procedure for installation of the items considering the modifications required to be done. Supply of all foundation materials (Bolts, Nuts & washers etc) including floor drilling machine are in Supplier's scope.
- 10.OIL will not accept any liability for accidents to supplier's personnel and any compensation required to be paid to the supplier's personnel will be borne by the supplier. The supplier's workmen will not be entitled to free medical assistance from OIL.
- 11. The offer and all documents enclosed with offer should be in English language only.
- 12. Packing should be adequate to avoid ingress of moisture and transit damage.
- 13. The material to be supplied must be new and from original manufacturer with serial number and date of manufacture.
- 14. The Inline Water Test Bath system will be deemed to be commissioned only after installation, commissioning and minimum period of 72 hours of observation.
- 15.BIDDERS must be in the relevant business of supply of Inline Water Test Bath for 14.2/19 Kg LPG Cylinders systems in India for a period of at least last 3 (Three) years as on bid closing date. BIDDERS are required to produce documentary evidence for the same.
- 16. The bidder must furnish at least 3 (three) work order / Bill payments receipt / purchase orders of similar Inline Water Test Bath for 14.2/19 Kg LPG Cylinders system jobs carried out in other Oil/Gas/Petroleum Organizations in India/Abroad.
- 17. Bidder will have to undertake the guarantee for all such items supplied by them as a part of the Inline Water Test Bath for 14.2/19 Kg LPG Cylinders system which is either bought out or

imported from some other party. Bidder will have to produce documentary evidence for the same along with the supply of materials.

- 18.Installation, testing & commissioning of the whole Inline Water Test Bath for 14.2/19 Kg LPG Cylinders system as well as functional testing of the complete system will have to be carried out by the Bidder to the full satisfaction of M/S OIL engineers at site which will form the basis of site acceptance test (SAT). Bidder will have to quote for the installation and commissioning charges, if applicable for our evaluation.
- 19. Bidder should depute adequate number of competent & qualified site personnel/workers at site to ensure smooth installation & commissioning of the new system.
- 20. The bidder will have to provide the item wise break-up of prices in the BOM to be submitted to OIL for evaluation. The same is a mandatory requirement for bid evaluation.
- 21. The Bid should be submitted in a proper format stating offered specification vs NIT specifications against each point. Bid in any other form will not be acceptable.
- 22. Name of OIL's approved third party inspection agencies are M/s. IRS, M/s Tubescope Vetco, M/s. DNV, M/s. RITES, M/s Lloyds & M/s. BV. Bidders must quote the inspection charges separately in % (percentage) in the offer for evaluation of offer, failing which it shall be construed that the quoted rates are inclusive of 3rd party inspection charges." When a bidder mentions third party inspection charges as extra without specifying the amount, the offer will be loaded with maximum value towards third party inspection charges quoted against the tender for comparison purposes. If the bidder emerges as lowest bidder after such loading and in the event of order on that bidder, third party inspection charges mentioned by OIL on the Purchase Order will be binding on the bidder. Please also quote minimum TPI charges in case of part order or the same will be calculated on pro-rata basis.

Tender No. : KID9835L16/03

Tender No. : KID9835L16/03
Tender Date : 07.01.2016
Bid Closing On : 16.02.2016 at 14:00 hrs.(IST)
Bid Opening On : 16.02.2016 at 14:00 hrs.(IST)

#### Tender issued to following parties only:

Slno	V_Code	Vendor Name	City/Country
1	203993	INTELLIGENT MICRO SYSTEM PVT. LTD.	CHENNAI
2	207144	DEY ENTERPRISES	KOLKATA
3	208637	L. P. GAS ENGINEERS & CONSULTANTS	MUMBAI
4	209095	ELECO ENGINEERING	KOLKATA
5	209097	INTELLIGENT MICRO SYSTEM PVT.LTD	PONDICHERRY
6	209099	PAM SYSTEM PVT LTD	NASHIK
7	209101	LPG SYSTEM	KOLKATA
8	209102	BRILLIANT ENGINEERS	JIND
9	209103	KOSAN CRISPLANT	HYDERABAD

#### **NOTICE**

Other than the vendors to whom the enquiry has been issued, interested vendors who wish to participate in the tender may apply with proper credentials and other relevant details so as to reach Head-Calcutta Branch, Oil India Limited, ICC Building, 4th Floor, 4 India Exchange Place, Kolkata - 700001, West Bengal (E-mail: oilcalmn@oilindia.in, Fax: 033-22302596) within 10 days of publication of the tender in OIL's website.

The vendors must fulfill the following conditions:

- i) The party should have three year's experience for the same item.
- ii) The party should have received one order for at least 50% quantity in last three years for the item from any reputed firm.
- iii) Annual turnover of the firm in any of the last three financial years or current financial year should be more than Rs 9.75 lakhs.

<u>NOTE</u>:i) Relevant documents in support of experience, last order and annual turnover must be submitted along with the application.

ii) Application without complete supporting document will not be considered.

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