



**TE-IMS-PEMM P&E KDS-SPEC-982**

<b>Description: (Specification for the appointment of a service provider who will rent out Bulk Mini Gas tanks and vaporizers to various Transnet Engineering Workshops for the period of two years and six months)</b>				
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Location:	Germiston and Koedoespoort			



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**9. Power Supply & Services:**

The tenderer shall indicate the electrical power supply and air (if applicable) required operating the equipment.

**10. Testing:**

The tenderer shall indicate the performance/s standard which the equipment will be subjected to.

**11. Specific Requirements:**

	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
	<b>Specification for the appointment of a service provider who will rent out Bulk Mini Gas tanks and vaporizers to various Transnet Engineering Workshops for the period of 2 years and 6 months.</b>	
1.	<b>Scope of work:</b>	
1.1	Supply and installation of Bulk Mini gas storage tanks with all gauges, safety valves, and shut off valves for the different gas types used at the different locations.	
1.2	Supply and installation of vaporizers as required.	
1.3	Supply and installation of manifolds & regulators for the different gas types used at the different locations.	
1.4	Supply and install Telemetry Units on all Mini gas storage tanks.	
1.5	Connect the new Mini gas storage tanks to the existing gas pipelines at all sites.	
1.6	Installation or repair of perimeter fence around Bulk Mini gas storage tanks.	
1.7	Supply and install all safety signage as required.	
1.8	Supply and install electrical connection as required.	
1.9	Inspection, Testing, Certification and Commissioning of the above-mentioned installations.	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
1.10	After installation maintenance and repairs.	
2.	<b>Installation of Bulk Mini storage tanks:</b>	
2.1	Different types of bulk mini storages tanks are required to house the following gases: Nitrogen and Oxygen. Refer to Annexure A for the details on type of gas to be stored and the capacity required. (2000 Lt.)	
2.2	Risk assessment and method statement on how the tanks will be installed shall be shared with the Executive Manager: FIM before any installation work can commence.	
2.3	Where an Environmental Authorisation is required the service provider must make sure that the required environment assessment processes are followed. (Basic Assessment or Full Environmental Impact Assessment).	
2.4	It shall be required that suppliers shall be responsible for any lifting machinery and lifting tackle for the installation of the bulk Mini gas storage tanks. All riggers used for the installation shall be accredited.	
2.5	The Bulk Mini gas storage tanks should be installed above ground. Transnet could provide the dimensions, concrete thickness, and concrete strength on some of the existing concrete plinths where the storage tanks will have to be mounted. Bidders to do own assessment on plinths. Any plinth that does not meet the minimum requirements need to be repaired or replaced by service provider and all engineering drawings shall be made available to Transnet FIM Executive Manager regarding the repaired or replaced concrete plinths. (Bidders to ensure that the existing concrete plinths could accommodate the new Mini storage gas tanks). Mini storage gas tanks to be secured to the plinths and should be strong enough to with stand intense winds.	
2.6	All Bulk Mini storage tanks shall be fitted with a GPRS enabled telecommunication level monitoring system. (To notify the gas supplier and user via SMS for refill when the tanks reach 30% of its contents).	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
2.7	Complete Control manifold shall be installed for each Bulk Mini gas storage tank.	
2.8	Complete detailed drawing regarding all equipment that needs to be installed for each Bulk Mini gas storage tank shall be handed over to the FIM Executive Manager to sign off before any commission of any installation. This shall in no way absolve the contractor from professional responsibility.	
2.10	The Bulk Mini gas storage tanks, piping, vaporiser and manifolds shall only be installed by registered and accredited personal. The installer should be registered as an industrial installer, maintenance, and repairs with SAQCC within applicable gas category. (Nitrogen and Oxygen).	
2.11	Service provider needs to apply for storage and operating certificate for all applicable gasses from the local Fire Chief. (Municipality).	
3.	<b>Bulk Mini storage Tanks:</b>	
3.1	Bulk Mini Storage tanks that will be installed should be designed and constructed in accordance with PD 5500 or ASME VIII. Any deviation from this design code must be presented and approved by the Executive Manager: FIM	
3.2	The Bulk Mini gas storage tanks should also comply to the following act, regulations & standard: - <ul style="list-style-type: none"> <li>• The Occupational Health and Safety Act – Act 85 of 1993 (As Amended)</li> <li>• SANS 347 - Standard Specification for categorization and conformity assessment criteria for all pressure equipment.</li> <li>• Pressure Equipment Regulations GNR.734 of 15 July 2009.</li> <li>• Where an Environmental Authorisation is required, the supplier must make sure that the required environment assessment processes are followed (Basic Assessment or Full Environmental Impact Assessment)</li> </ul>	
4.	<b>Certificates:</b>	
4.1	Certificate of manufacture countersigned by an approved inspection authority.	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
4.2	Test Certificates from an Approved Inspection Authority.	
4.3	Material certificate.	
4.4	Non-Destructive Testing (NDT) certificates for all welds in tension.	
4.5	Pressure test report for vessel. (Also, after transportation and installation of bulk storage gas tanks).	
4.6	Level gauge calibration certificate.	
4.7	Calibration certificate of pressure gauges.	
4.8	Calibration certificates for pressure relieve valves.	
4.9	Any pressure regulation certification not mentioned above.	
4.10	COC. Certificate of Compliance for installation.	
4.11	Storage and Operation Certificate from the Chief Fire Officer (Municipality) to also be submitted to TE.	
4.12	<b>Note:</b> All calibration certificates shall be issued by an approved SANAS accredited Laboratory.	
5.	<b>Vaporizers:</b>	
5.1	Vaporizers shall be designed and manufactured in accordance with ASME B31.3. Any deviation from this design code shall be presented and approved by the Executive Manager: FIM	
5.2	Vaporizers shall be selected for the desired pressure and flow rate.	
5.3	All atmospheric conditions shall be taken in consideration for the design and selection of any vaporizer.	
5.4	Vaporizers shall be properly secured and installed.	
6.	<b>Bulk storage enclosed area:</b>	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
6.1	Bidders to ensure that the areas where any bulk mini gas storage tanks are installed is properly enclosed. This shall meet the minimum requirements as per legislation. The existing fences must be repaired if damaged.	
6.2	Enclosure shall be equipped with lockable entrance gates to the facility for refilling and maintenance and inspection on the installed equipment.	
6.3	Spare set of gate keys for each bulk gas storage site shall be handed over to the FIM Executive Manager. Keys shall be clearly marked to ensure no confusion arise of which key are for which site.	
7.	<b>Signage:</b>	
7.1	All Bulk Mini gas storage tank areas shall be equipped with the necessary safety signage as required by legislation.	
7.2	Signage shall be mechanically secured that they do not fall off within the contract period. Signage indelible and only removable by deliberate intent.	
7.3	Signage shall be luminous UV. Resistant and shall not fade for a minimum period of five years.	
8.	<b>Electrical Connections and Earthing:</b>	
8.1	Transnet Engineering shall supply a supply point for any electrical equipment that needs to be connected to the Mini gas storage tanks for safe operation or monitoring.	
8.2	Suppliers shall be responsible for all electrical cables, distribution boards, circuit breakers, overload protecting and earthing for the safe operation of the Mini gas storage tanks.	
8.3	The electrical installation from the point of supply to the point of control and consumption shall be done by the supplier.	
8.4	All earthing and bonding shall be done by contractor.	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
8.5	An electrical Certificate of Compliance shall be issued to Transnet for each Electrical installation done.	
8.6	Electrical installation shall be done and certified by a Master Installation Electrician. Proof of Registration and certification shall be provided.	
8.7	Earth testing reports shall be handed over to Transnet Engineering to ensure sound mechanical earthing has been achieved.	
9.	<b>Connecting of Bulk Mini gas storage tanks to gas lines:</b>	
9.1	It is required that all new Bulk Mini gas storage tanks are connected to the existing gas lines at all Transnet Premises.	
10.	<b>Maintenance:</b>	
10.1	Maintenance of the Bulk Mini gas storage tank facility will be responsibility of the contractor.	
10.2	In case of breakdowns, contractor must avail himself within an hour after a call has been logged.	
10.3	Contractor must have employees working standby for afterhours break downs. Standby personnel must be at Transnet facility within an hour after a called was logged.	
10.4	A maintenance schedule must be shared with Transnet Maintenance Planners.	
11.	<b>Inspection &amp; Testing:</b>	
11.1	Annual Inspection and testing will be carried out by the contractor and the reports to be submitted to the Executive Manager: FIM.	
11.2	An inspection & testing schedule must be shared with Transnet Maintenance Planners.	
12.	<b>Calibration:</b>	



	<b>REQUIRED</b>	<b>DETAILS OF OFFER</b> Comply (Yes) / Do not comply (No)
12.1	Calibration of all equipment that needs calibration should be carried out by the contractor.	
13.	<b>General:</b>	
13.1	Any bidder who is sourcing goods or services from third party must “Indicate so via a valid signed agreement with the third party” describing the goods and service in details including the validity period of the agreement.	

**12. Installation and Commissioning:**

A detailed program (project-plan/gantt-chart) shall be submitted with the tender, indicating the main activities and periods necessary up to handover. The bidder shall submit with their tender a detail erection and installation procedure.

Considering that the tanks are not owned by Transnet, a Major Hazard Installation Risk Assessment by an AIA needs to be conducted and submitted to TE for enforcement.

The contractor shall be fully responsible for any damage caused to all supplied equipment and to Transnet Engineering’s assets during the installation, testing and commissioning. The supplier shall conduct a risk assessment as to identify anything that might hinder the installation of the equipment.



**13. ANNEXURE: TANKS SIZES REQUIRED**

<b>Plant</b>	<b>Area</b>	<b>Gas</b>	<b>No. of tanks</b>	<b>Capacity</b>
1708	KDS RSE	Oxygen	1	2000 litres
1708	KDS RSE	Nitrogen	2	2000 litres
3908	KDS Foundry	Oxygen	1	2000 litres
1407	GMR Wagons Man.	Oxygen	2	2000 litres
1407	GMR Wagons Man.	Nitrogen	1	2000 litres