



**REPAIR OF PORTIONS OF OLD
DAMAGED LPG AND OXYGEN PIPELINES,
TESTING COMMISSIONING.**

**DURBAN MAIN CENTRE, 311 SOLOMON
MAHLANGU DRIVE, ROSSBURGH.**

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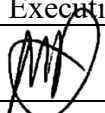
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Signature of Bidder/s: _____

Date: _____

Document Authorities

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Signature of Bidder/s: _____

Date: _____

1. INTRODUCTION / SCOPE of Work

This specification is for the:

#	TASK	REQUIRED
1	Design	
2	Manufacture	
3	Assess	
4	Strip, remove	✓
5	Supply	✓
6	Installation	✓
7	Documentation	✓
8	Testing	✓
9	Training	
10	Commissioning	✓

Of the specified:

#	ITEM	REQUIRED
1	Repair of portions of old damaged LPG and Oxygen pipelines, testing and commissioning.	✓
2	Submission of project completion and compliance documents.	✓

3. INFORMATION REQUIRED

- 3.1 Offers will not be considered unless full particulars and sufficient information are provided at the tendering stage to enable Transnet Engineering Technical Officers the opportunity to assess each technical offer properly.
- 3.2 Prospective Contractors will complete the relevant questionnaire in full and must indicate whether their offer complies with each item of the specification
- 3.3 Should there be insufficient space for furnishing full details; contractors shall provide the additional details in their covering letter. The additional details shall be numbered in accordance with the applicable clause specified in the specification.
- 3.4 As prospective contractors are considered to be experts in their field, they are obliged to identify any shortcomings, such as omissions or sub-standard requirements, to the completeness of this specification. These must be brought to the attention of Transnet Engineering at tender stage with alternatives to address these shortcomings. However, each offer shall be quoted for separately.

4. LEGAL REQUIREMENTS

All pressure equipment and installation shall comply with the Pressure Equipment Regulations, selected Health and Safety Standard (design code) and contractual requirements.

All pressure equipment and installations shall be safe and not pose risks to workers or the public.

Signature of Bidder/s: _____

Date: _____

The following act and regulations must be complied with:-

- **The Occupational Health and Safety Act – Act 85 of 1993.**

The certificate of manufacture required by the Regulations (including verification signature by an inspection body when so required) and relevant conformity assessment module (if applicable) in the case of equipment may NOT refer to more than one piece of equipment.

OHSA and its associated regulations, such as the Pressure Equipment Regulations, ensure that gas installations are safe and do not pose risks to workers or the public.

- **SANS 347:** This is a national standard which is mandated in the Pressure Equipment Regulation and is used to ensure technical compliance to regulatory requirements which include hazard categorisation and conformity assessment requirements
- **Gas Act (Act No. 48 of 2001):** To promote efficient, effective, sustainable, and orderly development of the gas industry, including infrastructure and services.

This Act provides the overarching legal framework for the gas industry in South Africa, including the licensing of gas pipelines and related activities.

4.1.1 Except where otherwise provided for in the specification, all equipment offered will comply with the requirements of the relevant standard specifications of the SABS, if published, otherwise with the relevant standard of the British Standards Institution in force at the time of tendering.

4.1.2 Where equipment offered complies with the recognized standards of the country of manufacture and not specifically with the standards required by this specification, such equipment will be considered at the discretion of Management. In this case, tenders shall state fully all respects in which the equipment departs from the standard laid down in this specification.

4.13 The successful tender will at the conclusion of the installation provide a document along the lines “that the installation complies with national/international requirements and that all selected /designed items are compliant with Act 85 of 1995 and SABS practices applicable to the installation. The equipment has been commissioned/ calibrated and employees as specified have been trained and found competent to operate the plant.”

5. SPECIFIC REQUIREMENTS

Any person with the intention of procuring the material or goods shall ensure that the information below is complied with.

5.1 Environment

- Outdoor.

Signature of Bidder/s: _____

Date: _____

5.2 Scope of work

Item no.	<u>REQUIREMENTS</u>
5.2.1	Repair of portions of old damaged LPG and Oxygen pipelines, testing and commissioning. The contractor to supply all the required materials for the project.
5.2.2	The old unused pipelines materials shall be transported to a designated area, within the Durban Main Centre complex and handed over to the Project Manager.
5.2.3	<ul style="list-style-type: none"> This scope of work shall be read with annexure 1 (Transnet safety, health and environmental management requirements). The contractor to be appointed under this contract must be registered with the CIDB with a minimum grading of 3ME or higher. To this end, Transnet Engineering Durban does not award contracts to any company without proof of this registration.

Item no.	Description	Qty
	Phase 1: LPG Bulk tank to inside Bay 52	
5.2.4	Repair existing 2-inch LPG pipeline from LPG Bulk tank to inside Bay 52.	132 (M)
5.2.5	<ul style="list-style-type: none"> Install, test and commissioning new 2-inch schedule 40 mild steel LPG pipe complete with Elbows where required. Replacement of corroded pipe supporting bracket where required. Tie-in 2-inch line to Bay 58 pipeline feed. Piping shall be primed with two coats of anti-corrosive paint and finished with two coats Sigma resin-based paint. (Light stone colour). Piping shall have directional flow arrows and product description spaced at six meter Intervals throughout the pipeline installed. 	138 (M)
5.2.6	Fit new 2-inch to 1-inch reducer at LPG bulk tank.	1 (EA)
5.2.7	Fit new 2-inch non-return valve at LPG bulk tank.	1 (EA)
5.2.8	Fit new ½” Inline hydrostatic valves.	2 (EA)
5.2.9	<ul style="list-style-type: none"> Fit new lockable, horizontally mounted, 2-inch ASA 150 flanged fire safe ball valve complete with hardware and gaskets. One valve to be fitted at the LPG bulk tank. The other to be fitted inside Bay 52 at 1200mm above ground level supported by a hot-dipped galvanized wall mounted bracket. 	2 (EA)
5.2.10	Fit new ASA 150 slip-on flanges. One set per isolation valve and the other set for connecting newly installed pipeline to existing TE installation (Golden Weld).	8 (EA)
5.2.11	<ul style="list-style-type: none"> Fit new “Emergency Shut Off” signage 2000mm above isolating valve. Signage shall have dimensions of 800x500mm, with red lettering at 140mm font size mounted on white background. 	2 (EA)
5.2.12	<p>Testing, Commissioning and Handover</p> <p>The following documentation shall be delivered to Transnet during the handover. The data pack shall include, but not limited to the following :</p> <ul style="list-style-type: none"> Accreditation certificate of service provider doing the installation (Industrial Installer). Accreditation certificate of the responsible person doing the installation (Industrial Installer). Approved inspection authority’s (A.I.A) certificate of conformance for the completed 	1 (EA)

Signature of Bidder/s: _____

Date: _____

	<p>installation (CoC).</p> <ul style="list-style-type: none"> • Pressure test certificate conducted by the A.I.A. • Copies of A.I.A accreditation. • Valid calibration certificates of equipment used for statutory tests. • Accreditation certificates for Coded welders. • Material certification for material/components supplied i.e., valves, 	
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Item no.	Description Phase 3: Bay 47 to Bay 48	Qty
5.2.13	Repair of existing 2-inch LPG pipeline from Bay 47 to Bay 48	60 (M)
5.2.14	<ul style="list-style-type: none"> • Install, test and commissioning new 2-inch schedule 40 mild steel LPG pipe complete with elbows where required. Replacement of corroded pipe supporting bracket where required. • Piping shall be primed with two coats of anti-corrosive paint and finished with two coats Sigma resin-based paint. (Light stone colour). • Piping shall have directional flow arrows and product description spaced at six meter intervals throughout the pipeline installed. 	60 (M)
5.2.15	<ul style="list-style-type: none"> • Fit new lockable, horizontally mounted, 2-inch ASA 150 flanged fire safe ball valve complete with hardware and gaskets. • One valve to be fitted at Bay 47 (Inside Bay). • One valve to be fitted at Bay 48 (Inside Bay). • Valves to be fitted at 1200mm above ground level supported by a hot-dipped galvanized wall mounted bracket. 	2 (EA)
5.2.16	Fit new ASA 150 slip-on flanges. One set per isolation valve and the other set for connecting newly installed pipeline to existing TE installation (Golden weld).	8 (EA)
5.2.17	<ul style="list-style-type: none"> • Fit new “Emergency Shut Off” signage 2000mm above isolating valve. • Signage shall have dimensions of 800x500mm, with red lettering at 140mm font size mounted on white background. 	2 (EA)
5.2.18	Repair of existing 2-inch Oxygen pipeline from Bay 47 to Bay 48	60 (M)
5.2.19	<ul style="list-style-type: none"> • Install, test and commissioning new 2-inch schedule 80 mild steel Oxygen pipe complete with elbows where required. Replacement of corroded pipe supporting bracket where required. • Piping shall be primed with two coats of anti-corrosive paint and finished with two coats Sigma resin-based paint. (Light stone colour with white intermitted markings at six meter intervals). • Piping shall have directional flow arrows and product description spaced at six meter intervals throughout the pipeline installed. 	60 (M)
5.2.20	<ul style="list-style-type: none"> • Fit new lockable horizontally mounted 2-inch ASA 300 flanged fire safe ball valve complete with hardware and gaskets. • One valve to be fitted at Bay 47 (Inside Bay). • One valve to be fitted at Bay 48 (Inside Bay). • Valves to be fitted at 1200mm above ground level supported by a hot-dipped galvanized wall mounted bracket. 	2(EA)
5.2.21	Fit new ASA 300 slip-on flanges. One set per isolation valve and the other set for connecting newly installed pipeline to existing TE installation (Golden Weld).	8(EA)

Signature of Bidder/s: _____

Date: _____

Item no.	Description	Qty
5.2.22	<ul style="list-style-type: none"> • Fit new “Emergency Shut Off” signage 2000mm above isolating valve. • Signage shall have dimensions of 800x500mm, with red lettering at 140mm font size mounted on white background. 	2(EA)
5.2.23	<p>The following documentation shall be delivered to Transnet during the handover. Data pack shall include, but not limited to.</p> <ul style="list-style-type: none"> • Accreditation certificate of service provider doing the installation (Industrial Installer). • Accreditation certificate of the responsible person doing the installation (Industrial Installer). • Approved inspection authority’s (A.I.A) certificate of conformance for the completed installation (CoC). • Pressure test certificate conducted by the A.I.A. • Copies of A.I.A accreditation. • Valid calibration certificates of equipment used for statutory tests. • Accreditation certificates for Coded welders. • Material certification for material/components supplied i.e., valves, pipe. • Radiographic report of X-rays done on 10% of total welds. 	1(EA)

Item no.	Description Phase 4: Bay 44 to Bay 55	Qty
5.2.24	Repair of existing 2-inch Oxygen pipeline from Bay 44 to Bay 55	42 (M)
5.2.25	<ul style="list-style-type: none"> • Install, test and commissioning new 2-inch schedule 80 mild steel Oxygen pipe complete with elbows where required. Replacement of corroded pipe supporting bracket where required. • Piping shall be primed with two coats of anti-corrosive paint and finished with two coats Sigma resin-based paint. (Light stone colour with white intermitted markings at six meter intervals). • Piping shall have directional flow arrows and product description spaced at six meter intervals throughout the pipeline installed. 	42 (M)
5.2.26	<ul style="list-style-type: none"> • Fit new lockable, horizontally mounted, 2-inch ASA 300 flanged fire safe ball valve complete with hardware and gaskets. • Valve to be fitted at Bay 44 (Inside Bay). • Valves to be fitted at 1200mm above ground level supported by a hot-dipped galvanized wall mounted bracket. 	1 (EA)
5.2.27	Fit new ASA 300 slip-on flanges. One set per isolation valve and the other set for connecting newly installed pipeline to existing TE installation (Golden Weld).	5 (EA)
5.2.28	<ul style="list-style-type: none"> • Fit new “Emergency Shut Off” signage 2000mm above isolating valve. • Signage shall have dimensions of 800x500mm, with red lettering at 140mm font size mounted on white background. 	1 (EA)
5.2.29	<p>Testing, Commissioning and Handover</p> <p>The following documentation shall be delivered to Transnet during the handover. Data pack shall include, but not limited to.</p> <ul style="list-style-type: none"> • Accreditation certificate of service provider doing the installation (Industrial Installer). • Accreditation certificate of the responsible person doing the installation (Industrial Installer). • Approved inspection authority’s (A.I.A) certificate of conformance for the completed installation (CoC). 	1(EA)

Signature of Bidder/s: _____

Date: _____

Item no.	Description	Qty
	<ul style="list-style-type: none"> • Pressure test certificate conducted by the A.I.A. • Copies of A.I.A accreditation. • Valid calibration certificates of equipment used for statutory tests. • Accreditation certificates for Coded welders. • Material certification for material/components supplied i.e., valves, pipe. • Radiographic report of X-rays done on 10% of total welds. 	

5.3 Markings

- All markings required by legislation shall be indelible and only removable by deliberate intent.

5.4 Services

- The tenderer shall advice in advance about the services required for this project.

5.5 Warranty

- **The warranty shall be for 2 years.**
- Specify when the system becomes fully operational and when the warranty period takes effect.
- The maintenance contract for the warranty period shall be included in the quoted price and shall involve TE employees to learn.
- The contractor shall undertake to repair all faults due to bad workmanship and/or faulty materials during a period of twenty four calendar months, calculated from the date that the completed plant installation is accepted by TE.
- Any latent defects that become apparent during the warranty period shall be rectified to the satisfaction of TE at the cost of the supplier.
- The contractor shall undertake work on the rectification of any defects that may arise during the guarantee period within 7 days of being notified of such defects.

Note: All work to be completed in each respect by suitably qualified person.

6. OTHER INFORMATION RELATED TO THE SCOPE

- 6.1 This specification states the minimum requirements relating to the work and in no way absolves the contractor from responsibility for sound engineering practice.
Any omissions or sub-standard requirements of this specification must be brought to the attention of Transnet Engineering at tender stage and optional prices for addressing such omissions must be provided.
- 6.2 Any matter relating to this work, which requires a decision from Transnet Engineering shall be presented to the Project Manager in charge.
- 6.3 All offers shall be completed in every respect with this specification. Only completed tenders shall be considered
- 6.4 The Technical Officer reserves the right to have the proposal checked independently by a third party.

Signature of Bidder/s: _____

Date: _____

6.5 Tenders must allow for monthly progress and clarification meetings on site initially and after commissioning for defect meetings when required. A meeting will be held after issuing of the tender to establish the exact scope and magnitude of the contract. No tender will be considered unless it has this Certificate signed by the Engineer or his representative.

7. HEALTH AND SAFETY REQUIREMENTS

- 7.1 All equipment whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.
- 7.2 All the necessary safety equipment such as guards over rotating equipment shall be supplied and the equipment shall comply fully with all the requirements of the South African Occupational Health and Safety Act, Act 85 of 1993 and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.

8. SPECIALIST SUB-CONTRACTORS

- 8.1 Only specialist sub-contractors who have previously successfully completed work of the type and extent specified in this document should be engaged. The tenderer shall provide the technical officer with sufficient proof of having suitable experience regarding the design and manufacturing of similar equipment. To this end, complete and detailed reference list shall be submitted with the tender. Reference list shall include addresses as well as contact person who may be visited for inspection of the equipment during the adjudication period.
- 8.2 The tender shall submit a complete list of proposed sub-contractors and suppliers of major components with his tender.
- 8.3 The tenderer shall be prepared to commit themselves in writing to the technical officer with an adequate, experienced and stable project team for the duration of the contract.
- 8.4 Transnet Engineering will not consider any Tenderer's offer that, in the sole opinion of Transnet Engineering, does not have adequate experience in the design and manufacture of such equipment.
- 8.5 Contractors shall do the installation simultaneously with other contractors on-site busy with other work and shall plan work that it integrates with other work performed.

9. EQUIPMENT

- 9.1 The required items shall be complete in all respects.
- 9.2 Tenderers shall supply a list of all materials proposed as well as the addresses of the local support companies.

10. GENERAL REQUIREMENTS

Operation will be in the following conditions:

Altitude	Sea level
Ambient temperature	0°C to 45°C
Relative humidity	50% to 100%
Atmosphere	Heavy saline

Signature of Bidder/s: _____

Date: _____

11. DEFINITIONS AND ABBEVIATIONS

CLIENT Transnet Engineering Durban

TECHNICAL OFFICER: Project Manager, Transnet Engineering Durban

CONTRACTOR : Contractor appointed under this specification document

12. GENERAL

- 12.1 The successful tenderer will be subjected to a workshop inspection by Transnet Engineering, to ensure that the facilities are to the satisfaction of the Transnet Engineering in terms of the quality control and equipment capabilities for manufacturing such type of equipment.
- 12.2 The tenderers shall guarantee that the rating and size etc. of the equipment offered, will be adequate to perform the duties required.

13. SITE ESTABLISHMENT

- 13.1 The contractor shall be solely responsible for safety of his staff and for providing security to safeguard his works and material on site, until such a time.
- 13.2 The contractor shall be required to attend site meetings when convened by the Project Leader controlling the contract.
- 13.3 The contractor will be responsible for any damages caused by his staff to the building and civil works on site.

14. PENALTY CLAUSES

- 14.1 Due to the criticality of this project, penalties will be levied for late deliveries.

Signature of Bidder/s: _____

Date: _____