

Transnet Pipelines

Tender Number: TPL/2025/10/0005/109151/RFQ

Description of the Service: THE PROVISION OF INSPECTION AND CALIBRATION SERVICES FOR PRESSURE RELIEF DEVICES AT VARIOUS TRANSNET PIPELINES SITES FOR A PERIOD OF FOUR (4) YEARS

PART C3: SERVICE INFORMATION

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Scope of Service

For

**Inspection, Calibration and Servicing of Pressure Relief
Devices for a Period of 4 (Four) Years.**

Transnet Pipelines

(an operating division of Transnet SOC LTD, a public company duly incorporated in terms of the Laws of South Africa, with Registration No. 1990/000900/30)

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Acronym

API : American Petroleum Institute
 ANSI : American National Standard Institution
 COP : Crude Oil Pipeline
 DJP : Durban to Johannesburg Pipeline
 SAP : System Application Programming
 PSV : Pressure Sustaining Valve
 P&ID : Process and Instrumentation Drawing
 F/PRV : Flow/Pressure Relief Valve
 TPL : Transnet Pipelines
 TRV : Thermal Relief Valve
 MPP : Multiproduct Pipeline
 RV : Relief Valve
 SANS : South African Nation Standards
 SAP : Systems Application and Products

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1. Background

Transnet Pipelines operates and maintains a national network of petroleum pipelines in South Africa from KwaZulu Natal coastline and inland regions. It is expected of Transnet engineering function or the owner of plant and equipment to setup a maintenance plan for calibration and maintenance for pressure relieving devices. Maintenance of safety devices is based on the SANS 347 Standard and API Standards 576 and 510 (for inspection of pressure relieving devices and maintenance of pressure relieving devices respectively).

2. Scope

The contractor is expected to conduct calibration and servicing of all safety devices on site. The Transnet Pipelines Artisan will remove the valve from the manifold/plant and hand over to the contractor to carry calibration services at the local workshop. PRV calibration will be done inline.

3. Site Description

The work will be carried out on TPL Depots and workshops. The contractor will drive to site to conduct services. Annexure A consist of a Map which indicate location of various the TPL Depots.

4. Technical Detail of Equipment

4.1 Thermal Relief Valves

- 4.1.1 Most Safety Valves are installed on the plant/manifold, air receivers, firefighting systems and feeder lines.
- 4.1.2 MPP Devices: The inlet fittings on TRVs are 1"Male and 1"Female NPT threads respectively.
- 4.1.3 COP and DJP Devices: The inlet fittings on TRVs are ½ "Male and 1"Female NPT threaded fittings on the inlet and outlet respectively.
- 4.1.4 The TRV set pressures are indicated on the nametag and can be verified from the P&ID.
- 4.1.5 TRVs will be calibrated once every three years.

4.2 Pressure of Flow Relief Valve

- 4.2.1 Flow Relief Valves forms part of high pressure to low pressure specification break and are to be serviced and calibrated once every ten Years.
- 4.2.1 PRVs on the firefighting systems are equipped with 2" inlet fittings, their set pressure is indicated on their nametags or process drawing.

4.3 Set Pressure

- 4.3.1 Transnet Pipelines Mainline and Plant are built to ANSI pressure class: 150#, 300#, 600# and 900#.
- 4.3.2 Safety Valve attached to Air Receivers are calibrated once every three years. The set pressure is indicated on the design data and also engraved on the nameplate.
- 4.3.3 The set pressure on TRVs installed on road tanker' loading arms are set at 1000 KPa.

4.4 Name Tags and Isolation Seals

- 4.4.1 Safety valves are fitted with nameplates, calibration tags and a seal mechanism.
- 4.4.2 Manufactures name plate are permanent features of the valve and must not be altered.
- 4.4.3 Calibration Tags are supplied and labelled by the contractor. Calibration tags must be made out of stainless steel or aluminium plates. They are additional to the manufacture's name plate. These Tags shall indicate: Calibration Date, Calibration Pressure and Expiry date. The Tag must be attached to the valve body seal.
- 4.4.4 The pressure setting spring must be locked and sealed by the service provider after achieving calibration settings.

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5. Calibration Frequency

5.1 Calibration Frequency of TRVs

The frequency of calibration for TRVs will be once every three years.

5.2 Calibration Frequency of PRVs

Pressure/Flow Relieving Valves will be calibrated once every ten years.

5.3 Work Scheduling

5.3.1 TPL Mechanical Supervisor will issue a list of all the due job cards after the 26th of every month.

5.3.2 Above list/schedule is drawn from SAP on a monthly basis.

5.3.3 The contractor will schedule work, communicate the action plan and arrange execution of all calibration due job cards before the 25th of the following month.

6. Contractor Testing Procedure

The contractor must supply a testing procedure for Transnet Pipelines evaluation and approval prior to the execution of the proposed procedure. The testing procedure shall be applied with consideration to this scope of work.

7. Penalties

The contractor schedule for the month must be executed before the 25th of the reporting month. The delay cost as a resultant of the contractor's delay will be borne by the contractor. The penalty cost will be equivalent to the damages or waste incurred as a result of faults, delays or non-performance by the contractor.

8. Inspection and Calibration Requirements

The following steps need to be followed upon receiving a SAP plant maintenance schedule:

- 8.1 Setup appointment for onsite or inline maintenance and calibration of valves.
- 8.2 Arrive on site and arrange a work permit for maintenance and calibration of RVs.
- 8.3 Setup up a test pump and equipment for servicing and calibration.
- 8.4 Receive TRVs from Transnet Pipelines Technical Personnel.
- 8.5 Pressure relief valve will be assessed and calibrated inline. TPL control room personnel shall assist in pressurising the line that is to be calibrated with the right product.
- 8.6 Record the physical condition for each TRV and connect it to test block/pump to determine "as received" test pressure.

Note: A TRV or PRV is still in a good state if it pops/releases at its test pressure on three or more consecutive occasions. Record this pressure on the calibration certificate.

- 8.7 Calibrate the valve in the presence of a Transnet Pipelines employee. Valve Seat tests are to be witnessed by Transnet Pipelines Personnel.
- 8.8 Pressure setting parameters must be conducted as per data given by Transnet Pipelines and must correspond to the nametag.
- 8.9 Contractor to seal the valve and provide a detailed calibration tag.
- 8.10 Record the condition of the valve and produce calibration certificate.
- 8.11 Hand over the valve to Transnet Pipelines personnel for commissioning upon successful calibration.

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9. Valve Servicing Requirements

- 9.1 Examine body and condition of fittings.
- 9.2 Determine or test and record the as-received pop pressure.
- 9.3 If calibration is out: strip the valve, inspect for defects, clean the components, address the
- 9.4 defect, assemble and calibrate the valve.
- 9.4 Sealing of valve cones re-lapping is only required if the valve is leaking due to cone defects.
- 9.5 Produce calibration certificate.
- 9.6 Irreparable valves must be replaced by new or refurbished ones followed by calibration and certification.
- 9.7 It will be the prerogative of TPL to service or replace a faulty valve.
- 9.8 TPL will keep spare valves for most of the valves.
- 9.9 Service provider will supply a rate for servicing of a TRV and for PRV (See the BOQ for Rates).

10. Contractor Scope of Supply

- 10.1 Own Transport to and from site.
- 10.2 Sufficient Skilled Manpower to carryout work.
- 10.3 Own PPE and Marking tools, PPE aligned to TPL requirements prescribed in the 009-TPL-OPS-SHEQ-2096 Standard Operating Procedure PPE.
- 10.4 Test pump connection equipment which can accommodate valve inlet from ½ " Threaded fittings and flanged fittings of up to 16".
- 10.5 Certified calibration gauges with valid tests certificate.
- 10.6 Certificate to proof calibration results.
- 10.7 Calibration Tags (To indicate valve number, latest calibration and expiry date).
- 10.8 Valve Seals.
- 10.9 Marking Tools.
- 10.10 Calibration device.
- 10.11 Polishing and lapping tools and compounds.
- 10.12 Upon completion of valve calibration, the contractor must issue the valve calibration certificates to TPL.

11. Emergency Work:

Defects and failures must be addressed when safety valves are reported to be faulty. Service Providers are required to respond within (24 Hours) of defect notification.

12. Health and Safety Requirements

"The service provider shall at all times comply with Safety, Health and Environmental requirements prescribed by the relevant legislation as well as the Transnet Contractor Management Procedure (TIMS-GRP-PROC-014) as they may apply to the scope of services. The service provider shall comply with the provisions of the Occupational Health and Safety Act, 85 of 1993 and relevant regulations as amended. The service provider performs duties of the employer and is in every respect responsible for compliance with the provisions of the act. The service provider will be responsible for the safety, health and environmental rules that TPL may require to be implemented. The service provider shall ensure that no employees or persons working on his/her behalf are allowed to enter any Transnet Pipelines site, unless that employee or person has undergone safety, health and environmental induction pertaining to the hazards prevalent to the site at the time of entry. The service provider shall ensure that all employees working on site have valid medical certificates of fitness specific to the scope of work to be performed and issued by an occupational health practitioner. Before establishing or entering any Transnet site, the contractor shall submit a Safety, Health and Environmental Compliance file for review and approval by

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Transnet Pipelines. The submission requirements will be aligned to the scope of services of the contractor."

The HSE Compliance File submission will contain the following as a minimum:

- 12.1 Sign: OHS ACT 85 OF 1993 Section 37.2 appointment.
- 12.2 Produce current letter of good standing with the compensation fund.
- 12.3 Provide a copy of risk assessment and related method statement for work activities.
- 12.4 Relevant legal appointments.
- 12.5 Provide a record of employee competency training.
- 12.6 Provide evidence of registration with engineering body.
- 12.7 SANAS proof of calibration records of testing equipment.
- 12.8 Produce Copies of Identity documents for employees.
- 12.9 Valid medical certificates of fitness.
- 12.10 Police Clearance for entry into NKP sites.
- 12.11 Health and Safety plan.

13. Security Compliance

The Contractor will be expected to go through security screening prior to be given access to Transnet premises. The following documents are needed from the company: -

- 13.1 Company registration number.
- 13.2 CIPC registration.
- 13.3 Company TAX clearance TCS Pin.
- 13.4 Copies of ID of directors.
- 13.4.1 Fingerprints of directors (Use SAP 91) to be found at local SAPS. Original fingerprints must be submitted.
- 13.5 Copies of ID of employees who will be working on site.
- 13.5.1 Fingerprint of employees who will be working on site (Use SAP 91) to be found at local SAPS. Original fingerprints must be submitted.

Note: Please take note that SSA takes 3- 4 weeks for screening to take place once all required documentation has been submitted I will personally submit to SSA office.

14. TRV Calibration Sheet (Typical data sheet to be compiled for individual sites)

TRV Index Sheet: Island view terminal

Calibration date: _____

Next due date: _____

No	Manufacturer and Size	As is Pop Pressure Kpa	Reseal Pressure KPa	Reset Pressure KPa	P&ID Tag Number	SAP Number	Serial Number	Comments	Certificate Number
1	C Dresser 1/2 " x 1"	2400	1900	1800	51TRV01	1001671	TJ453487	Isolation valve leaks through	Overdue
2	Lesser 1/2 " x 1"	8800	9900	9800	51TRV01	1001777	S767898	Manufacture Tag Missing	319541
3	B Birkett 1/2"x 3/4 "	9900	9900	9800	51TRV01	1001679	G-792022	In Good Order	319542
4	Farris 1/2"x3/4"	9900	9900	9800	51TRV01	1001681	86-10833	Valve needs replacement	Overdue
5	Crosby 1"X 1 1/2 "	9900	9900	9800	51TRV01	1001688	973519	The valve is in good order	319544

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15. Valve Schedule of Fittings:

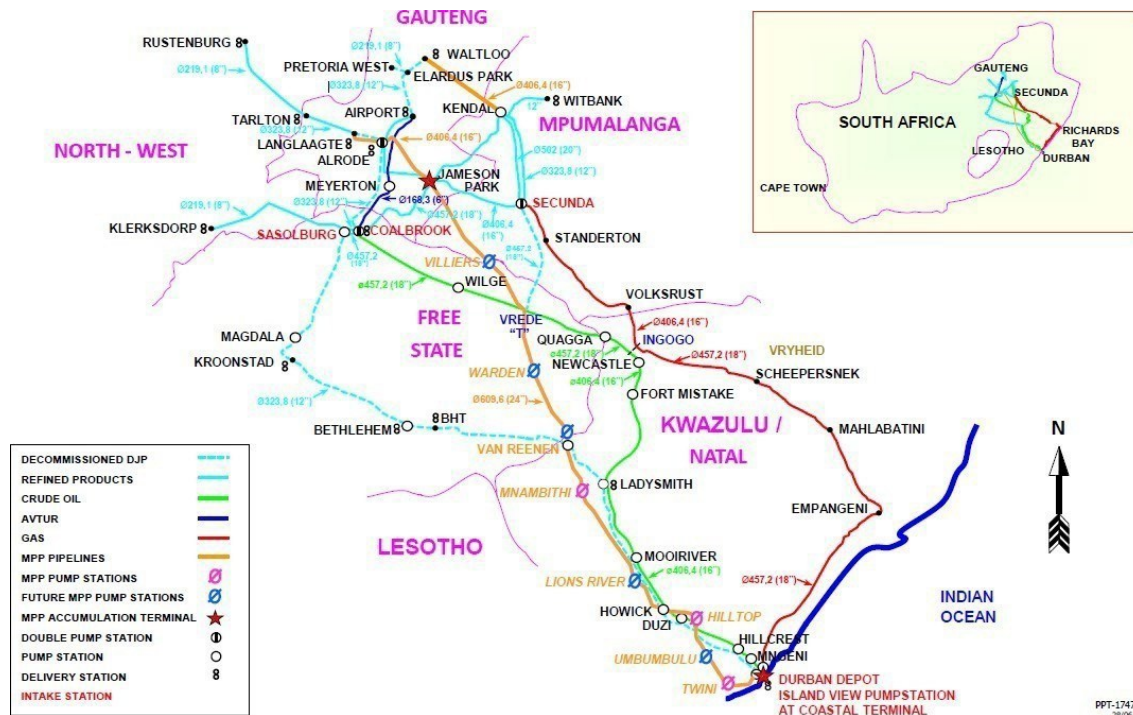
Item No	Inlet Fittings and Flanges	Pressure / ANSI Class	Equipment
1	½ "; 1" and 2 " (NPT Male Inlet Fitting)	150#,300# and 600#	TRV
2	1" (NPT Male inlet fitted with hand lever)	600#	TRV
3	1" X ¾ "	900#	TRV
4	2" to 16" Flanged Pressure Relief Valve	150#	PRV
6	Pilot valves on Pressure Sustaining Valves	170 kPa	PSV

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Annexure 1



Annexure 2

Facilities	Address
Alrode Operations Depot	35 Garfield Street, Alberton, Alrode, 1451
Airport Operations Depot	opposite 40 Springbok Road, Boksburg, 1472
Langlaagte Operations Depot	42 Main Reef Rd, Industria, Langlaagte, 2042
Tarlton Operations Depot	Cnr Rustenburg / Ventersdorp R, Tarlton, 1749
Rustenburg Operations Depot	4 Escom Street, Rustenburg, 0300
Coalbrook Operations Depot	Jan Haak Rd (Ent Natref Gate), Sasolburg, 1947
Sasolburg Operation Depot	Cnr Henry & Bergius Street, Sasolburg, 1947
Hillcrest Operations Depot	Shongweni Rd (adjacent Plantations), Hillcrest, 3650
Mngeni Operations Depot	6 Stockville Rd, Mahogany Ridge, Westmead, 3600
Duzi Operations Depot	Ottos Bluff Rd, Dunimarle, Pietermaritzburg, 3600
Mooi River Operations Depot	District Rd (D54), Mooi River, 3600
Howick Operations Depot	Old Main Road North/Tweede, Howick, 3290
Mnambithi Operations Depot	un-named road off R600, on farm Kranskloof 13091, Ladysmith
Ladysmith Operations Depot	Hyde Rd, TFR Industrial site, Ladysmith, 3370
Ladysmith Workshop Depot	7 Hamilton Road, Ladysmith, 3370
Fort Mistake Operations Depot	off N11 Ladysmith-Newcastle
Newcastle Operations Depot	56 Marconi Street, Newcastle, 2940
Quagga Operations Depot	Farm Road (P213), Quagga, 3100

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Scheepersnek Depot	Main Rd Dundee to Vryheid (MR34), Vryheid, 3100
Witbank Operations Depot	9 Schoonland Drive, Ferrobank, Witbank, 1035
Secunda Operations Depot	Near Brandspruit Mine, adjacent SASOL, Secunda, 2302
Standerton Workshop Depot	Heidelberg Road (R23), Standerton, 2430
Warden Operations Depot	Harrismith, Harrismith district, Rondavel 1674, Farm Road
Twini Operations Depot	305 Wanda Cele Str, Amanzimtoti
Alrode Workshop Depot	3 Akasia Rd, Alrode, 1451
Hilltop Operations Depot	Farm road on Whispers 13893, off Chief Mhlabunzima Rd, Copesville
Villers Operations Depot	Cornelia, Cornelia district, Niemandskraal, Farm Road
	Total