

TRANSNET PORT TERMINALS – PORT OF DURBAN BBC**SCOPE OF WORK****PROJECT TITLE**

**PROVISION OF PRESSURE VESSEL TESTING SERVICES FOR TRANSNET PORT TERMINALS
DURBAN BBC TERMINAL AS A ONCE OFF SERVICE**

1. **BACKGROUND**

The Port of Durban BBC comprises of the Agri-Bulk and the Multi-purpose terminals responsible for the exporting and importing of different commodities through conveyor belts, mobile materials handling equipment, trucks, and rail. The efficient operation of equipment determines the success of the organisation.

The multi-Purpose Terminal is vastly comprised of bulk material handling facilities, mobile harbour cranes, a fleet of haulers, car-ramps and trailers carrying skips and containers for operations to the nominated vessels. Normal wear and tear is experienced during these operations and requires constant equipment condition monitoring and maintenance to achieve the relevant availability of equipment for the operations.

BBC also have eight compressors (4off screw type & 4off piston) and thirteen pressure vessels, that are vital for different uses such as inflating tyres for Fleet Equipment and Mechanical Pneumatic power tools ,so it very important to keep them in service to ensure availability of equipment. Ten pressure vessels are stationed at Agri-port. Maydon Wharf, three pressure vessels are at Durban Point RORO. For these works, 9 pressure vessels are in need of the 36month legal testing.

2. **SCOPE OF WORK**

General scope

- 2.1. The AIA-M shall come for a site visit before quoting for the work, to discuss Scope of work /or Inspection procedure, to review documentation/previous history, data plates for compliance to Pressure Equipment Regulation of Act 85 and applicable Codes
- 2.2. The Pressure Vessel Inspector (Authorised Person) and AIA-M shall ensure that the requirements of the relevant health and safety standard incorporated in Act 85, PER of Act 85, SANS 347, SANS 10227, SANS 10228, SANS 10254, SANS 329 and SANS/ISO 17020 is complied with at all times
- 2.3. The AIA-M shall state beforehand what preparation needs to be done by Transnet, e.g. access permit, availability of pressure vessels, availability of water, etc.
- 2.4. AIA-M to carry out all Mechanical Work (Blanking Off and Filling of Water)
- 2.5. AIA-M to supply their own SANAS Calibrated Gauges, Thickness Meter and Pressure Pump
- 2.6. PV Inspector to give a written onsite inspection report (work done, authorisation to use vessel or not) on the day of inspection
- 2.7. To hand in final inspection report in 5 days or as soon as possible.

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DETAILED SCOPE

Approved Inspection Authority-Manufacturing (AIA-M) to conduct 36 Months Statutory Inspections or Pre-commissioning Inspections & Hydraulic Pressure Testing for 9 off Pressure Vessels at TPT Maydon Wharf Agriport Terminal Grain Elevator, Maydon Wharf MHA Workshop, Point MHA Workshop, Point F-Shed & Point M-Shed Durban.

TPT Maydon Wharf Agri-Port Terminal Grain Elevator – Back Compressor Room:

Vertical Air Receiver – Serial No: 22129, Capacity: 650 litres

- AIA-M to carry out 36 months statutory inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water).
- AIA-M to also test & reseal safety valve, Test certificate to be issued for safety valve.
- Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges.
- Paint the air receiver to the legal colour code using industrial coating.

Oil Separator in Atlas Copco GA90FF Compressor – Serial No: 211624, Capacity: 62 litres

- AIA-M to carry out 36 months statutory inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water).
- AIA-M to also test & reseal safety valve. Test certificate to be issued for safety valve.
- Paint the air receiver to the legal colour code using industrial coating.

TPT Maydon Wharf Agri-Port Terminal Grain Elevator – Vigan 1 Machine:

Vertical Air Receiver – Serial No: MB 820611007, Capacity: 250 litres

- AIA-M to carry out conformity assessment (countersign certificate of conformity), pre-commissioning inspection, hydraulic pressure test, wall thickness tests, mechanical work (blank off & fill vessel with water) and supply/fit additional compliant name plate (hard stamp name plate).
- AIA-M to Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges. Test certificate to be issued for safety valve. Test or calibration certificate to be issued for pressure gauge.
- Paint the air receiver to the legal colour code using industrial coating.

Oil Separator in Atlas Copco G11FF Compressor – Serial No: 89938, Capacity: 6.6 litres

- AIA-M to carry out pre-commissioning inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water). AIA-M to also test & reseal safety valve, supply

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their own test pump and SANAS calibrated test pressure gauges. Test certificate to be issued for safety valve.

- Paint the air receiver to the legal colour code using industrial coating.

TPT Maydon Wharf Agriport Terminal Grain Elevator – Vigan 2 Machine:

Vertical Air Receiver – Serial No: MB 783970126, Capacity: 250 litres

- AIA- to carry out conformity assessment (countersign certificate of conformity), pre-commissioning inspection, hydraulic pressure test, wall thickness tests, mechanical work (blank off & fill vessel with water) and supply/fit additional compliant name plate (hard stamp name plate).
- AIA-M to Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges. Test certificate to be issued for safety valve. Test or calibration certificate to be issued for pressure gauge.
- Paint the air receiver to the legal colour code using industrial coating.

Oil Separator in Atlas Copco G11FF Compressor – Serial No: 90160, Capacity: 6.6 litres

- AIA-M to carry out pre-commissioning inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water). AIA-M to also test & reseal safety valve, supply their own test pump and SANAS calibrated test pressure gauges. Test certificate to be issued for safety valve.
- Paint the air receiver to the legal colour code using industrial coating.

TPT Maydon Wharf MPT Terminal MHA Workshop:

Vertical Air Receiver – Serial No: ILE 9475, Capacity: 570 litres

- AIA-M to carry out 36 months statutory inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water).
- AIA-M to also test & reseal safety valve, Test certificate to be issued for safety valve.
- Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges.
- Paint the air receiver to the legal colour code using industrial coating.

TPT Point MPT M-Shed:

Horizontal Air Receiver – Serial No: OP 30140, Capacity: 270 litres

- AIA-M to carry out 36 months statutory inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water).
- AIA-M to also test & reseal safety valve, Test certificate to be issued for safety valve.

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- Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges.
- Paint the air receiver to the legal colour code using industrial coating.

TPT Point MPT F-Shed:

Horizontal Air Receiver – Serial No: ILT 2029, Capacity: 270 litres

- AIA-M to carry out 36 months statutory inspection, hydraulic pressure test, wall thickness tests and mechanical work (blank off & fill vessel with water).
- AIA-M to also test & reseal safety valve, Test certificate to be issued for safety valve.
- Supply and install new pressure gauge with calibration certificate
- Supply their own test pump and SANAS calibrated test pressure gauges.

3. ISSUING OF DOCUMENTATION AND CERTIFICATION PRIOR TO THE INSPECTION:

- 3.1. AIA-M accreditation certificate from SANAS
- 3.2. AIA-M approval certificate from Dept. of Labour
- 3.3. AIA-M schedule from SANAS
- 3.4. SAQCC PV Certificate of the authorised inspector carrying out the inspection. Inspector's name must be stated on schedule or proof of application to SANAS to add on
- 3.5. SANAS calibration certificate for their Test Pressure Gauge used to do the pressure test. Serial numbers must reflect on report
- 3.6. Thickness meter calibration certificate
- 3.7. Certificate for Technician/Inspector carrying out the wall thickness tests
- 3.8. NDT Certificate for the Technician if NDT was carried out
- 3.9. Transnet's (User) appointment letter (OSH Act) to carry out the in-service inspection

4. ISSUING OF FITNESS OF SERVICE INSPECTION/ASSESSMENT REPORT

Report will contain the following:

- 4.1. Certificate of continuance or inspector states on inspection report "fit for use or continued use" or Stop Certificate (Non Conformance)
- 4.2. Inspection/assessment report or statutory periodic vessel inspection report
- 4.3. Hydraulic Pressure test certificate or details of hydraulic pressure test is reflected/stated on inspection report
- 4.4. Non-destructive test report if conducted
- 4.5. Manufacturer's Certificate if available
- 4.6. Name/Data plate details
- 4.7. Photograph of Name/Data plate

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- 4.8. Drawing of vessel if available
- 4.9. Wall thickness measurements
- 4.10. Photographs if required
- 4.11. Previous history details (Certificate of Continuance/Pressure test certificate) if required

5. SAFETY AND COMPLIANCE

- 5.1. The service provider shall comply with all applicable safety laws and regulations including instructions received from TPT Management and all requirements of the TIMS SHEQ contractor Specification Guidelines.
- 5.2. Service provider to provide all necessary SHE compliance documentation required by TPT SHEQ department including the submission and approval of a safety file.
- 5.3. The service provider shall be required to undergo TPT's safety induction training programme prior to commencing work.
- 5.4. The service provider must ensure compliance to TPT's Security and emergency policies, procedures, and regulations.
- 5.5. There shall be zero tolerance of any form of substance abuse i.e. alcohol, drugs etc. The service provider and/or its employees shall be required to submit to random drug and alcohol testing.
- 5.6. The service provider shall ensure that its employees present on the TPT site are furnished with and wear safety clothing or personal protective equipment in accordance with the risk assessment undertaken for this purpose. (E.g., reflective jackets, safety boots, hard hats etc.).

6. LIST OF TOOLS/EQUIPMENT

- 6.1. High pressure hose reel 30m and connectors
- 6.2. 4x Tyre filling pressure gauge

A) Issuing of documentation and certification prior to the AIA-M inspection:

- AIA-M accreditation, schedule certificates from SANAS & approval certificates from DoL.
- SAQCC PV/IPE certificate of the authorised inspector carrying out the inspections.
- SANAS calibration certificate for their Test Pressure Gauge used to do the hydraulic pressure test. Serial numbers must reflect on report.
- Thickness meter calibration certificate.
- NDT certificates for Technician/Inspector if NDT was carried out, wall thickness tests.

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B) Issuing of fitness of service inspection/assessment report after AIA-M inspection

Report will contain the following:

- Certificate of continuance or inspector states on inspection report "fit for use or continued use" or Stop Certificate (Non-Conformance).
- Pre-commissioning or 36 months statutory inspection/assessment report.
- Hydraulic Pressure test certificate or details of hydraulic pressure test is reflected/stated on inspection report.
- Wall thickness measurements.
- Non-destructive test report if conducted.
- Manufacturer's certificate.
- Applicable conformity assessment review certificate.
- Date name plate details.
- Additional data name plate details.
- Photo of all data name plates.

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