

**PART C3: SERVICE INFORMATION**

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## C3.1 Service Information

### 1 Description of the *service*.

#### 1.1 Executive overview.

The service that the *Contractor* is to perform includes:

- **mechanical and welding refurbishment on above ground diesel tanks:**

- i) perform Non-Destructive Testing (certificate a pre-qualifier) for new welds,
- ii) provide a gas tester, with calibration certificate,
- ii) issue a report to the Employer, prior commissioning of the tank, a report for all new welds in which a non-destructive testing must be performed,
- iv) submit a quality data pack to the Employer's Agent, this quality data pack must be signed by the relevant parties, including review by the American Petroleum Institute (API) inspector after the execution of the scope, with all the necessary required information, i.e., welding procedure, welder's qualifications etc,
- v) provide a safety file, with all the necessary required information, i.e., method statement, risk assessment, medicals, legal appointments etc,
- vi) all repairs must be done as per the American Petroleum Institute (API) 63 code.

The work will take place at the tank farm area, of each of the fuel depot. The below are the sections of the diesel tank, on which the repairs will be carried out:

- **tank roof:**

- i) sand blast (wet or dry sand blasting) the entire tank roof.
- ii) supply and install both normal and emergency venting systems, equip them with a screen mesh that complies with American Petroleum Institute (API) 653.
- iii) install an anti-slip strip on the roof, to cover all service points.
- iv) install steel wear plates on the Automated Gauging (ATG) supports.

- **roof nozzles:**

- i) replace steel goose neck vent in kind.
- ii) fit new seal, to dip hatch.
- iii) tighten any loose bolts on auto gauge nozzle.

- **handrails, platforms, supports and access stairway:**

- i) sand blast or wire brush handrails, platforms and access stairways.
- ii) replace severely corroded steel staircases in kind.
- iii) repair all extensively corroded areas of handrails and mid-rails.
- iv) the cracked attachment welds, must be removed, by grinding and a suitable reinforcement plate with radius corners, to be welded to the shell plate, where applicable. The support frame can be re-welded to the reinforcement plates.
- v) install support structures, permanently anchored to the foundation.

Description of the Service: The refurbishment of diesel tanks, at various Transnet Freight Rail depots, for a service period of five (5) years.

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- **shell external:**

- i) sand blast the entire tank shell.
- ii) remove and replace all non-conforming patch plates, with rounded steel patch plates, in accordance with American Petroleum Institute (API) 653 standard.
- iii) conduct a positive material identification (PMI) test, prior any welding work.
- iv) all welding procedures prepared for this repair work, must consider the positive material identification (PMI) test results.
- v) install data plates, which comply with American Petroleum Institute (API) 650 and American Petroleum Institute (API) 653.
- vi) install an American Petroleum Institute (API) style tank name plate.

- **shell nozzles:**

- i) carry out remedial grinding, to remove welds, carry out repairs in accordance with American Petroleum Institute (API) 653 standards.
- ii) all threaded connections, to be replaced by welded connections, in accordance with American Petroleum Institute (API) 653.
- iii) remove coating around the nozzles and perform dye-pen test, to identify the pin-hole leak, and repair the leak as per American Petroleum Institute (API) 653 code.
- iv) remove plugs from tell-tale on all reinforcements.
- v) supply and install welded thermal relief system, with isolation valves around the tank inlet and outlet valves.
- vi) supply, calibrate and install a Pressure Reducing Valve set at 350 kPa, refer to attached drawing for the installation.
- vii) supply and replace all old types of tank valves (ball), with new ones, including steel bolts.
- viii) supply and fit spiral wound gaskets, on flanges, where required.
- ix) remove the existing drainpipe supports that do not comply with American Petroleum Institute (API) requirements.
- x) supply and install the steel H-type supports.
- xi) in some instances, the inlet nozzle and outlet pipe, seem to be misaligned. You need to review the current system design and correct this, and the reviewed designed drawing should be submitted to Transnet Engineering for approval.
- xii) boxing up the tank – supply and install a new graphite gasket on the tank manhole, including new bolts and nuts.

- **shell internal:**

- i) remove all non-conforming patch plates and replace them with conforming, rounded patch plates, in accordance with American Petroleum Institute (API) 653.
- ii) prepare the first strake of the shell and the floor, for painting.
- iii) apply epoxy coating on the first strake of the shell, and the tank floor, once the repairs have been completed.

- **tank floor internal, and**

- i) repair all marked pitted areas, from 3.00mm and above, by means of scab/overlay welding, using approved weld procedures and qualified welders.
- ii) install a steel strike plate (200mm X 200mm X 6mm EN10025 grade S355 JO) directly under dipping location, where it does not exist.

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- iii) change clearance distance of water draw-off, to sump bottom, as per American Petroleum Institute (API 650) requirements, by trimming water draw-off pipe back to acceptable height, where required.
- iv) supply and apply epoxy coating, on the tank floor.

▪ **tank foundation:**

- i) grind/wire brush/grit blast, repair and reinstate coating system on corroded areas of floor projection plate around entire tank periphery, to arrest further corrosion.
- ii) fill and compact all voids with suitable material, designed at 45° and higher enough, to avoid water to ingress the bottom of the tank, also aid to draw water away from the tank, as well as the foundation.
- iii) restore coating system at affected anchor bolts.
- iv) Ensure the bottom-to-shell connection meets the requirements of American Petroleum Institute (API) 650, section 5.1.2.1
- v) American Petroleum Institute (API) 650, section 5.8.11.3, requires that the tank be equipped with four (4) grounding lugs.
- vi) supply and install additional ground lugs, where required.
- vii) re-install waterproof membrane around tank projection plate.
- viii) Install a dip hatch and steel strike plate. See SANS 10131:2004, section A.3.10.10 where required.
- ix) required.

▪ **painting:**

- i) spray paint the tank externally, including the handrails, platforms, and access stairway, using the oxide primer as first coat.
- ii) spray paint two (2) coats of silver aluminium paint, as second and final coat on the entire tank, including handrails, platform, and access stairway.

▪ **limits and exclusions:**

- i) no scope changes must be made on site, without obtaining approval from the *Service Manager*.

▪ **tank information:**

Name of depot	Quantity	Diameter of the tank	Height of the tank	Capacity of the tank	Length of the tank
Coligny (North West Province)	2	7.74 m	9.60 m	46 5570 L	-
Klerksdorp (North West Province)	1	2.34 m	-	30 000 L	5.500 m
Rustenburg (North West Province)	2	2.40 m	-	23 000 L	7.3 m
Germiston (Gauteng Province)	3	7.64 m	9.80 m	449 500 L	-
Kaserne (Gauteng Province)	2	2.02 m	-	28 364 L	9.880 m

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Sentrarand (Gauteng Province)	2	3.05m	16.4m	119 760 L	-
Koedoespoot (Gauteng Province)	1	7.64 m	4.93 m	225 890 L	-
Millsite (Gauteng Province)	2	10.02 m	11.02 m	930 000 L	-
Springs (Gauteng Province)	2	2.00 m	-	36 890 L	11.75 m
Kroonstad (Free State Province)	2	4.92 m	11.93 m	191 169 L	-
Sasolburg (Free State Province)	1	2.89 m	16.4 m	107 500 L	-
Bethlehem (Free State Province)	3	2.89 m	16.4 m	107 500 L	-
Bloemfontein (Free State Province)	2	26.29 ft	33.0 ft	17 657.33 ft3	-
Thabazimbi (Limpopo Province)	1	2.95 m	-	80 000 L	12.80 m
Tzaneen (Limpopo Province)	2	2.89 m	16.45 m	107 900 L	-
Phalaborwa (Limpopo Province)	1	2.95 m	-	57 790 L	8.46 m
Polokwane (Limpopo Province)	1	7.52 m	9.50 m	500 000 L	-
Beaconsfield (Northern Cape Province )	1	9.47 ft	42.64 ft	2 885.63 ft3	-
De-Aar (Northern Cape Province)	3	7.00 m	8.00 m	300 000 L	-
Klawer (Northern Cape Province)	2	19.74f t	34.44 ft	9711.53 ft3	-
Upington (Northern Cape Province)	2	25.03 ft	25.0 ft	12 177 ft3	-
Ground-Zero-Sishen (Northern Cape Province)	2	Self-bunded tanks.		68 000 L	-
Bellville (Western Cape Province)	2	5.00 m	10.0 m	475 000 L	-
Saldanha (Western Cape Province)	6	9.47 ft	41 ft	2 839 ft3	-
Voorbaai (Western Cape Province)	2	8.00 m	12.00 m	303 000 L	-
Worcester (Western Cape Province)	2	5.00 m	11.00 m	300 000 L	-
Cambridge (Eastern Cape Province)	2	7.50 m	5.40 m	252 000 L	-

Swartkops (Eastern Cape Province)	2	8.00 m	12.00 m	465 000 L	-
Danskraal (Kwa-Zulu Natal Province)	2			23 000 L	
Masons-Mill (Kwa-Zulu Natal Province)	2	7.52 m	11.93 m	529 600 L	-
Newcastle (Kwa-Zulu Natal Province)	2	6.02 m	8.90 m	253 200 L	-
Richards-Bay-iNsezi (Kwa-Zulu Natal Province)	2	10.02 m	11.93 m	940 250 L	-
Vryheid (Kwa-Zulu Natal Province)	2	2.89 m	16.40 m	107 500 L	-
Wentworth (Kwa-Zulu Natal Province)	2	10.02 m	11.94 m	941 000 L	-
Ermelo (Mpumalanga Province)	2	10.02 m	11.94 m	941 000 L	-
Komatipoort (Mpumalanga Province)	1	2.89 m	16.40 m	108 000 L	-
Lydenburg (Mpumalanga Province)	2	7.70 m	10.30 m	250 000 L	-
Ogies (Mpumalanga Province)	1	2.40 m	2.90 m	64 500 L	12.00 m
Waterval-Boven (Mpumalanga Province)	1	No dimensions available because this is an underground tank.		68 000 L	-
Witbank (Mpumalanga Province)	1	2.50 m	-	55 000 L	8.57 m
Nelspruit (Mpumalanga Province)	2	7.50 m	9.50 m	420 000 L	-

## 1.2 Employers Objective.

The *Employer's* current objective is to acquire the services of a petrochemical contractor/s, with working knowledge of American Petroleum Institute (API) 650 standard and South African National Standards, to cover the mechanical and welding refurbishment (a construction activity which involves removing and replacing parts of the existing diesel tanks/infrastructure), at various Transnet Freight Rail depots, nationwide.

## 2 SERVICE

### 2.1 Temporary service, Affected Property & constraints on how the *Contractor* Provides the Service.

#### 2.1.1 Affected Property entry and security control, permits, and Affected Property regulations.

The *Contractor* complies with the *Employer's* Affected Property entry and security control, permits and Affected Property regulations.

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#### 2.1.2 Restrictions to access on Affected Property, roads, walkways and barricades:

- 2.1.2.1 The *Contractor* is specifically excluded from entering the *Employer's* Operational Areas which are adjacent to the Affected Property. The *Contractor* plans and organises his work in such a manner so as to cause the least possible disruption to the *Employer's* operations.
- 2.1.2.2 The *Contractor* ensures safe passage of his team, to traffic and around the Affected Property working areas at all times which includes providing flagmen.
- 2.1.2.3 The *Contractor* ensures that any of his staff, labour and Equipment moving outside of his allocated Affected Property and Service Areas, does not obstruct the operations of the *Employer*. To this end, access routes are allocated and coordinated by the *Service Manager*.
- 2.1.2.4 The *Contractor* ensures that all his Service staff, labour, and Equipment remains within his allocated and fenced off working Area.
- 2.1.2.5 All *Contractor's* staff and labour working within Affected Property complies with Transnet Freight Rail (TFR) operational safety requirements and are equipped with all necessary personnel protective equipment (PPE).

#### 2.1.3 People restrictions on Affected Property; hours of work, conduct and records:

The *Contractor* keeps daily records of his people engaged on the Affected Property with access to such daily records available for inspection by the *Service Manager* at all reasonable times.

### 3 LIST OF REFERENCE SPECIFICATIONS.

The above stipulation is for information and reference purposes only.  
Please refer to electronic references.

Drawing number	Revision	Title
01	0	Drawings for shell nozzles: supply, calibrate and install a Pressure Reducing Valve set at 350 kPa.

### 4 PROCUREMENT.

#### 4.1 The *Contractor's* Invoices

4.1.1 The invoice states the following:

- Invoice addressed to Transnet SOC Limited.
- Transnet Limited's VAT No: 4720103177.
- Invoice number.
- The *Contractor's* VAT Number; and

4.1.2 The invoice contains the supporting detail:

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A bill format as per the tender document indicating previously paid, paid to date and amount due for the month.

The invoice is presented either by post or by hand delivery.

The invoice is presented as an original.