ADDENDUM 2

A Division of Transnet SOC Limited

TECHNICAL

PROCUMENTS SPECIFICATION ADDENDUM

BBH2723 v3 Appendix 3

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1. Scope

This specification covers Transnet Freight Rail's additional requirements to Transnet Specification BBH2723 V3 for 3-phase diesel driven standby generator sets of 20kVA-500kVA sizes.

2. Background

Technical requirement for the 3 phase diesel drive generators sets of 20KVA-500kVA are provided off in Transnet Technology management specification BBH2723 V3 supplied with the Transnet procurement sourcing pack. However additional technical requirement and security requirements are covered by this Annexure 3 of the specification.

3. Foundation Requirements

3.1 Concrete Strength

The concrete used for casting each generator foundation shall have a minimum compressive strength of 25MPa.

3.2 Slump Tests

Slump tests shall be conducted during the casting of each foundation to ensure proper consistency and workability of the concrete mixture.

3.3 Concrete Mixing Analysis Report

A comprehensive Concrete Mixing Analysis report shall be provided during the casting process, detailing the proportions of materials used in the concrete mixture, as well as any additives or admixtures employed.

3.4 Reinforcement

All generator foundations shall be reinforced with a mesh wire to enhance structural integrity and support.

3.5 Minimum Concrete Depth:

The minimum allowable depth of concrete for each generator foundation shall be no less than 220mm to provide adequate stability and load-bearing capacity.

3.6 Foundation Size

The size of each generator foundation shall be at most 4 meters by 2 meters, with a depth of at least 220mm, ensuring sufficient surface area and depth to support the generator unit securely.

3.7 Cabling

The supplier shall provide a minimum of 50m cabling for connecting to the Distribution board and ensure that all cabling are installed according to Transnet specification for installations of cables CEE 0023

4. Security Requirements

4.1 A steel fencing system shall be installed around the perimeter of the generator area to secure the generator unit.

4.2 The fence shall have good see-through visibility - so that all equipment within the operational asset is clearly visible.

4.3 The supplier shall ensure that a minimum of 1m is observed between the perimeter fence and any part of the generator

4.4 The fencing shall be constructed using galvanized steel to resist corrosion and ensure durability. Galvanising thickness must adhere to SANS121 and/or SANS3575, 4998 respectively - depending on the process of galvanising chosen

4.5 The contractor shall ensure the fence is PVC powder coated to prevent electrolysis from stray currents.

4.6 The main posts shall be hot dipped galvanised. Galvanising thickness must adhere to SANS121 and/or SANS3575, 4998 respectively - depending on the process of galvanising chosen

4.7 The height of the fencing shall be a minimum of 2 meters to deter unauthorized access.

4.8 The fencing shall be equipped with lockable gates for authorized entry and maintenance access.

4.9 Installation of the steel fencing shall comply with relevant safety standards and local regulations.

4.10 The top of the steel fencing shall be fitted with spikes to further deter unauthorized access.

4.11 The mesh design of the fence shall be of aperture size small enough to exhibit both anti-cut and anti-climb characteristics.

4.12 The supplier shall ensure that none of the main posts are joined by welding in order to comply with the specified height

4.13 The corner posts shall have a 12 mm diameter hole drilled in the centre of the section 300 mm above ground level for earthing purposes. The hole shall be drilled before galvanising

5. Special Requirement

5.1 Transnet Notes that high sites are at an elevated height above sea level with the highest point being 2 000 mm above sea level and adverse weather condition that can drop as low as -20 degrees in the karoo. These conditions are to be assessed area by area.

5.2 The supplier shall ensure that for all altitudes above the minimum environmental condition as stipulated in Transnet specification BBH2723 V3, they conduct derating according to site

5.3 The suppliers shall derate the relevant mobile generators for the high site to the correct environmental rating according to SANS 10142-1-2.

5.4 The supplier shall ensure that all Cable trenching and conduit designs are submitted to Transnet for approval prior commencement of work.

6. Compliance

6.1 All aspects of the foundation design and construction shall comply with relevant local building codes, regulations, and industry standards.

6.2 The supplier shall ensure that a (Certificate of Compliance) CoC is issued for all supplies to the DB per area of deployment

7. Quality Assurance

Quality control measures shall be implemented throughout the construction process to ensure that both the foundation design specifications and the steel fencing requirements are met, including regular inspections and testing procedures.

8. Documentation

Detailed documentation, including drawings, calculations, test reports, compliance certificates, and fencing specifications, shall be maintained for each generator foundation and steel fencing installation, providing a comprehensive record of the design, construction, and quality assurance activities.