



**SUPPLY, DELIVERY, INSTALLATION,  
REPAIR, TESTING AND  
COMMISSIONING, TO REPAIR THE  
DAMAGED SUBSTATION EQUIPMENT  
FOR TRANSNET ENGINEERING.**

**311 SOLOMON MAHLANGU DRIVE,  
ROSSBURGH.**

**REFERENCE: FAI\_DBN\_SPEC\_232**

**Date of release: NOVEMBER 2024**

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Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_



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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	Supply	✓
4	Installation	✓
5	Documentation	✓
6	Testing	✓
7	Training	
8	Commissioning	✓

## 2. SITE INSPECTION

- 2.1 All prospective contractors shall be required to undertake a compulsory site inspection to fully acquaint themselves with all aspects involved.
- 2.2 Arrangements to visit the site and confirmation of the date and time of the site inspection shall be made with Transnet Engineering Contract Manager.
- 2.3 The site inspection certificate shall be completed and countersigned by the Contract Manager on the day of the visit and must be submitted with the tender documents.

## 3. INFORMATION REQUIRED

- 3.1 Offers will not be considered unless full particulars and sufficient literature 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.

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

#### 4. TECHNICAL REQUIREMENTS

The following regulations and codes must be complied with:

- 4.1 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.
- 4.2 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.
- 4.3 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 1993 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 tender shall ensure that the information below is complied with.**

Scope of work.

No.	REQUIREMENTS
5.2.	<b>Supply, installation, testing and commissioning 33 kV ABB switchgear components.</b>
5.2.1	On 33kv ABB Unigear ZS2 (as per ABB ref#VZA15001BGT).
5.2.2	Earth limit switch -Earth off -BE1 (9 each).
5.2.3	Earth limit switch -Earth on -BE2 (9 each).
5.2.4	Racking limit switch on breaker – BT3 racked in/out (7 each).
5.2.5	Racking solenoid – RL2 110Vdc (7 each).
5.2.6	33kV panel spouts bushings (3 each).
5.2.7	33kV Interphase barriers polycarbonate – per cubical (10 panels).
5.3	<b>Supply, installation, testing and commissioning 11 kV ABB switchgear components.</b>
5.3.1	On 11kv ABB Unigear ZS2 (as per ABB ref#VZA10001BGT).
5.3.2	RET 615 E_E HBTFCADNBA1 BNN 1 XE relay (1 each).
5.3.3	REF 615 E_E HBFEAEAGNBA1 BNA 1 XE relay (1 each).
5.3.4	Earth limit switch -Earth off -BE1 (30 each).
5.3.5	Earth limit switch -Earth on -BE 2 (30 each).
5.3.6	Earthing solenoid locking bolt – RL3 (4 each).
5.3.7	800/1A 7,5VA 5p20 800/1A 7,5VA cl 0,5 block type CT's (6 each).
5.3.8	Incomer cable end breaker spouts (3 each).
5.3.9	Provide all test and functionality report per component unit installed after installation and commissioning.

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

No.	REQUIREMENTS
5.4	<b>Cleaning of Siemens Minimum bulk oil, 11kV, OCB's and Busbar panels at Bay 2 Substation (7 panels). Provide high-voltage AC pressure test report on completion to confirm recommended acceptable value.</b>
5.5	<b>Cleaning of Siemens Minimum bulk oil, 11kV, OCB's and Busbar panels at Bay 55 substation (5 panels). Provide high-voltage AC pressure test report on completion to confirm recommended acceptable value.</b>

#### 5.6 Installation

- The supply, delivery, installation, testing and commissioning shall be done at Transnet Engineering, 311 Solomon Mahlangu Drive, Rossburgh.

#### 5.7 Commissioning

- A testing period of 1 month (744 hours for 24/7 shifts and 248 hours for 8 hour shifts) this shall depend on what shift the business requiring this works. Confirmation shall be given on site visits and minutes captured.**

#### 5.8 Warranty

- The warranty shall be 12 months.**
- A maintenance contract for the warranty period shall be included in the quoted price and shall involve Transnet employees to learn.**
- Specify when the system becomes fully operational and when the warranty period takes effect.

#### 5.9 After-Sales Service

- The successful tenderer shall provide Transnet Engineering with acceptable proof that spares can be easily and speedily procured for the equipment within 7 working days through agents locally.
- The contractor must be available to conduct repairs within 12 hours after verification of fault.

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

## 6. GENERAL

6.1 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.

6.2 The tenderers shall guarantee that the rating and size etc. of the equipment offered, will be adequate to perform the duties required.

## 7. OTHER INFORMATION RELATED TO THE SCOPE

7.1 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.

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

- 7.2 Any matter relating to this work, which requires a decision from Transnet Engineering shall be presented to the Project Manager in charge.
- 7.3 All offers shall be completed in every respect with this specification. Only completed tenders shall be considered.
- 7.4 The Technical Officer reserves the right to have the proposal checked independently by a third party.
- 7.5 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.

## 8. HEALTH AND SAFETY REQUIREMENTS

- 8.1 All equipment and installation whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended by applicable local authorities. All equipment shall be designed to **fail to safety**.
- 8.2 Sudden power losses must not have an adverse effect on equipment and shall not unduly delay return to operation after power is restored.
- 8.3 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. At all times during the manufacture, assembly and testing of the equipment the contractor will be responsible for the safety of all persons on site and the equipment.

### 8.4 Safety Induction:

Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a **Safety induction course**. Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.

The contractor must allow for all additional charges because of these requirements as no claims for extras whatsoever will be entertained in connection with the foregoing.

### 8.5 Risk Assessment:

The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project. A safety file and associated documents will be required from a successful tenderer and such will be communicated by the risk Department. The successful contractor shall comply with Transnet Engineering SHE specification.

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

## 9. SPECIALIST SUB-CONTRACTORS

9.1 Only specialist sub-contractors who have previously successfully completed electrical 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.

9.2 The tender shall submit a complete list of proposed sub-contractors and suppliers of major components with his tender.

9.3 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.

9.4 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

9.5 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.

## 10. MATERIAL AND WORKMANSHIP

10.1 Machinery shall be offered complete in all respects, including all standard equipment normally offered by manufactures, all of which shall be specified in detail.

10.2 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies, and be built to good engineering practices. Tenderers shall supply a list of all the main components (mechanical, electrical etc.) proposed as well as the addresses of local the support companies.

10.3 All parts and components shall be adequately protected against damage and corrosion during shipping, transport and storage.

## 11. 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

11.1 Tenderers shall indicate clause-by-clause either that they comply in every respect with the specific requirements, or if not, exactly how it differs.

Signature of Bidder/s: \_\_\_\_\_

Date: \_\_\_\_\_

## 12. DEFINITIONS AND ABBEVIATIONS

CLIENT	Transnet Engineering Durban –
TECHNICAL OFFICER	Project Manager, Transnet Engineering Durban
CONTRACTOR	Contractor appointed under this specification document
SABS	South African Bureau of Standards
BS	British Standard Specification
FEM	Federation of European Mechanical Handling Standard
ISO	International Organisation for Standardisation
PRODUCT	Complete shot blast facility including structure
TE	Transnet Engineering

## 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 the work is completed.
- 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: \_\_\_\_\_