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**PORT OF NGQURA:  
SPECIFICATIONS FOR REPAIRS OF  
ALLEN BRADLEY POWERFLEX 755 VARIABLE  
SPEED  
DRIVES AT SAND BYPASS, TNPA PORT OF  
NGQURA FOR A ONCE OFF PERIOD**

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**1. INVITATION TO SUBMIT A QUOTATION**

- 1.1. Tenderers are hereby invited to tender for the repairs of three (3) Allen-Brandley PowerFlex 755 variable speed drives (VSDs) at the pump stations of the Sand bypass system, TNPA Port of Ngqura(Once off period).
- 1.2. Only tenderers who have experience in similar work and are Original Equipment Manufacturer approved suppliers and installers of Allen Bradley Powerflex 755 Variable Speed Drives, are eligible to submit quotations.

**2. SCOPE OF WORKS**

2.1. BACKGROUND

The purpose of this scope of works is to repair three (3) Allen-Bradley PowerFlex 755 VSDs, by supplying and replacing any faulty components at the Sand Bypass system plant within the Port of Ngqura. Two out of the three drives are situated at the Main Booster station, while the remaining one is installed at Booster station 2 site. Main pump station variable speed drive, M2 VSD which drives Sulzer pump is operational however shows an error code: (Not Enabled). And the second one, BO VSD which drives the Warman Centrifugal Pump is faulty and shows error code: (C-10117 T1 Overcurrent). Booster station 2, the VSD here has been non-operational for a very long time due to faulty cards and fuses as per table clause 2.2.1

2.2. SCOPE OF WORKS

2.2.1. The scope of works comprises of:

- Supply and delivery of the following components:

Material	Quantity
(i)Inverter Power PCB (SK_RI_PCI_F8)	4
(ii)Inverter Gate PCB Board (SK_RI_IGI_C7700740)	4
(iii)Inverter Power Control PCB Board (SK_RI_PWRSI_CD_F8)	3
(iv) IGBT	6
(v)Fuses- (a) Bussman 1400A, 690V/700V with switch and without brackets	2
(b) 800A, 670V/ 700V with and without brackets	3

(c) 1100A, 670V/ 700V with and without brackets	3
(vi) Inverter Power Layer interface PCB board (SK_RI_PINT2_F8)	3
(vii) Inverter Power Control PCB 400/480V (SK_R1_PWRS1_CD_F8)	1
(viii) CBP Control Board (SK-R1-CBPCHL2-F8)	1
(ix) Filter Board 400/690V (SK-R1-EMCFLT2-F8)	2
(x) Pilz Safety contactor (PNOZ X4) 2 Channel	2

2.2.2. Strip and repair the Allen-Bradley PowerFlex 755 variable speed drive at Main pump station and Booster station 2 site using the material/spares supplied in 2.2.1. NO PARTS WILL BE REPLACED SHOULD IT BE FOUND TO BE STILL FUNCTIONAL & SHOULD THE VSD UNIT BE TAKEN OUT, IT SHOULD BE REINSTALLED AND COMMISSIONED.

2.2.3. Supplied parts not used will be kept and prioritized for other booster stations where they will be needed or kept as Transnet property for use in future maintenance.

2.2.4. Conduct performance test and ensure main pump and booster 2 station is working.

### 2.3. LOCATION OF THE SITE, SITE ACCESS, AND COMPULSORY SITE MEETING

2.3.1. The Project is located at Sand bypass Main Pump Station and Booster Pump Stations at TNPA Port of Ngqura, Port Elizabeth, Eastern Cape, South Africa.

2.3.2. Access to the site can be gained via the N2 on to Neptune Road, past the Port Entrance Plaza.

### 2.4. GENERAL

2.4.1. The Contractor shall execute the works as per this scope of works.

2.4.2. All quantities measured in the Bill of Quantities are estimates and may vary during the course of the project.

2.4.3. All conditions of contract shall be finalized by the TNPA Procurement Department in line with TNPA contract documentations and procurement policies.

### 2.5. WORKING HOURS

2.5.1. The working hours shall be from 08h00 to 16h30, Monday to Friday.

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## 2.6. DAILY DATA SHEET

- 2.6.1. The Contractor must submit to the TNPA Project Manager for verification and sign off, data sheets on the Contractor's stationary which shows the work completed to site.
- 2.6.2. All data sheets shall be signed off by the TNPA Project Manager and submitted together with the invoice.
- 2.6.3. The Contractor shall submit test results indicating the quality control done on materials delivered to site to the TNPA Project Manager.

## 2.7. PAYMENTS

### 2.7.1. General:

- Assessments of the Works for payment shall be done by both parties (Contractor & TNPA Project Manager) and shall be signed off by TNPA project manager.
- When the TNPA Project Manager certifies payment following an assessment, the Contractor shall comply with TNPA's procedure for invoice submission.
- The invoice must correspond with TNPA Project Manager's assessment of the amount due to the Contractor as stated in the payment certificate. • The invoice must be presented as an original.

### 2.7.2. Invoice Supporting Documents:

The invoices shall contain all supporting documentation to be signed off and approved by the TNPA Project Manager:

- Bill of quantities,
- Copies of delivery notes,
- All data sheets,
- Any other information required by the TNPA Project Manager to enable him to approve the invoice.

- 2.7.3. Claims will not be accepted for items and quantities that do not have a data sheet signed off by TNPA Project Manager.

### 2.7.4. Invoice Details:

The invoice shall state the following:

- Purchase Order Number.
- Name of the Contractor as it appears in the tender documentation.
- Invoice addressed to Transnet National Ports Authority.
- Transnet SOC Limited's VAT No: 4720103177.

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- Invoice number.
- The Contractor's VAT Number.
- The Contract numbers.
- The invoice is to be accompanied by statement of invoices (to be signed off and approved by the TNPA Supervisor). • Settlement discount.

2.7.5. Payments, as per the Transnet Finance Policy, will be made 30 days after the invoice and claims is approved by Transnet.

## 2.8. COMPLETION & TERMINATION OF CONTRACT

2.8.1. This Contract will be considered complete upon the execution of the items as stated in the Bill of Quantities.

2.8.2. Despite anything in the contract to the contrary, TNPA Port of Ngqura may, by providing a written notice to the contractor, terminate the contract immediately if the contractor:

- a) Suffers an insolvency event;
- b) Refuse to comply with any reasonable instruction or direction of the TNPA Port of Ngqura representative;
- c) Is in breach of this contract and has failed to rectify the breach following a written request do so by TNPA Port of Ngqura.

## 2.9. DEFECTS & GUARANTEE OF THE WORKS

2.9.1. The contractor shall supply TNPA Port of Ngqura with a 12 months warranty on the workmanship.

2.9.2. The contractor shall indicate the guarantee and warranty of the components installed.

## 2.10. INDEMNITY AND INJURY MANAGEMENT

2.10.1. The Contractor or Operator and any persons from the Contractor working on site must first ensure that they provide their signatures on the indemnity form that will be provided by TNPA security before entering the site.

## 2.11. COMMUNICATION

2.11.1. All communication and instructions shall be via, email and a formal letter.

2.11.2. All verbal communication and instructions shall be confirmed in writing.

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2.11.3. The Contractor shall provide all their contact details with their tender submissions.

#### 2.12. COMPLIANCE

2.12.1. The contractor shall comply with TNPA Port of Ngqura's HSE regulations and requirements.

#### 2.13. PARKING

2.13.1. Parking will be at the project site or at the Sand Bypass Depot.

2.13.2. Parking of the Contractor's plant and vehicles in the Port will be at the Contractor's risk.

#### 2.14. ASSIGNMENT AND SUBCONTRACTING

2.14.1. If the Contractor has sub-contracted the designated work, TNPA Port of Ngqura requires the Contractor to notify TNPA, of any such appointments and to ensure that the subcontractor complies with all conditions as stated in this contract.

2.14.2. The main contractor will still ultimately be responsible for all terms and conditions as stated in this contract and under no circumstances will any responsibility be transferred to the sub-contractor.

#### 2.15. QUALITY CONTROL

2.15.1. TNPA shall reserve the right to inspect the contractor's facilities and workshops prior, during and after award of the contract.

2.15.2. The Contractor shall conduct quality control of the components & supply TNPA with a copy of the Material Certificates & specifications.

#### 2.16. PLANT AND MATERIALS

2.16.1 All Plant, Materials and Equipment required for the execution of the works shall be supplied by the contractor.

### 3. TNPA PORT OF NGQURA HSE REQUIREMENTS

3.1 Any HSE Documentation required shall be communicated to the contractor by TNPA HSE after award of the Purchase Order.

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#### 4. RETURNABLE DOCUMENTS

4.1 The contractor is to submit the following returnable documents with the tender for evaluation:

- Company profile
- Lead time on delivery
- Material specifications, certificates & material test reports
- Components guarantees.

#### 5. LEGAL MATERS

5.1. All data provided to the Contractor during the course of the Project is the property of Transnet.

5.2. No sharing, copying, or use of the data for personal gain will be allowed without the written approval of TNPA Port of Ngqura.

#### 6. PRICING INSTRUCTIONS

##### 6.1. INTRODUCTION

6.1.1. Pricing Assumptions mean the criteria as set out below, read together with all Parts of this specification document, which it will be assumed in the contract that the tenderer has taken into account when developing their rates and prices.

6.1.2. Tenderers are advised that the Bill of Quantities is a “provisional bill” subject to remeasurement as the work proceeds. The initial quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done and shall be re-measured and paid for based upon the actual final quantity of work done and certified for payment by the Project manager in terms of the Contract and as described in the Pricing Assumptions.

##### 6.2. GENERALLY

6.2.1. The terms “Schedules of Quantities”, “Bill of Quantities” and “Bills of Quantities” shall have the same meaning.

6.2.2. The Bill of Quantities contain only brief descriptions to identify the salient items required and the Tenderer is referred to the Generic Conditions of Contract, Scope of Work, and drawings for the full requirements.

6.2.3. The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices to be paid by the TNPA for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit.

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- 6.2.4. Where an item in the Bill of Quantities makes reference to a specific measurement and payment clause, the rate or price of the item shall also include for all costs stated in the particular payment clause. Such reference will be to the relevant Pricing Assumption item. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents.
- 6.2.5. A price or rate is to be inserted against each item in the Bill of Quantities and an item with no price will be deemed to be covered by the other prices or rates in the Bill of Quantities.

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## 7. BILL OF QUANTITIES

#	Cost element	Unit	Quantity	Total Cost (R)
1.	<b><u>PRELIMINARY AND GENERAL</u></b>			
1.1	HSE File	Sum	1	
2.	<b><u>Repairs of three (3) Allen-Bradley PowerFlex 755 VSD at Main Pump and Booster 2 stations</u></b>			
2.1	Supply and delivery of all the components / parts listed (34) at <b>clause 2.2.1</b>	Sum	1	
2.2	Repair the three VSD units by stripping, identifying faulty parts and replace them with the supplied components list.	Sum	1	
2.3	Produce performance test report for each VSD	Sum	3	
2.4	<b>Contingency 10% of the total</b>			
	<b>Sub-total (R)</b>			
	<b>Add 15% VAT (R)</b>			
	<b>TOTAL (R)</b>			

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