



SCOPE OF WORK: High-pressure testing and refilling of Pyro shield fire suppression systems for the Port of Port Elizabeth substations on a once-off basis.

For: **TNPA Port of Port Elizabeth**
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1. INVITATION TO SUBMIT A QUOTATION

- 1.1 Service providers are hereby invited to tender for the scope of work that involves the high-pressure testing and refilling of Pyro shield fire suppression systems for the Port of Port Elizabeth substations on a once-off basis.
- 1.2 Service providers shall have a minimum of CIDB grading of 2ME or higher to qualify to bid.

2. INTRODUCTION

- 2.1 The Port of Port Elizabeth operates two Pyro shield Fire Suppression Systems installed in critical substations:
 - Main Intake Substation,
 - Main Substation (Charl Malan Quayside),
- 2.2 These systems are essential for protecting high-value electrical infrastructure using a clean, electrically non-conductive, and non-toxic extinguishing agent suitable for occupied spaces and sensitive equipment.
- 2.3 As per the Pressure Equipment Regulations (PER) under the Occupational Health and Safety Act, several Pyro shield and Nitrogen pilot cylinders are due for mandatory High-Pressure Testing. This regulatory requirement is essential to ensure the safe and effective operation of the fire suppression systems and to maintain compliance with safety legislation.
- 2.4 The scheduled testing and servicing of these components are necessary to preserve the integrity of the systems, ensure minimal operational disruption, and safeguard the port's infrastructure against fire-related downtime.

3. SCOPE OF WORKS AND GENERIC CONDITIONS OF CONTRACT

3.1. SCOPE OF WORKS

- The scope of work includes the removal, High Pressure Testing, and reinstallation of Pyro shield Fire Suppression Cylinders and Nitrogen pilot cylinders across two substations.
- All discharge and actuation hoses to be replaced.
- Include calibration and functional verification of all control and release valves within each substation to ensure compliance with manufacturer specifications and operational integrity.
- All work must comply with legislative safety standards and be carried out by certified technicians registered with SAQCC (South African Qualification and Certification Committee) and compliant with SANS 14520 standards.
- Specifically, the following items have been identified for testing:

161 x 80L Pyro shield Cylinders

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- Compile and submit all the test report associated with the works and update stickers in the cylinder with the next inspection and testing dates.
- Conduct calibration of all installed pressure gauges across both substations, covering a total of 161 cylinder-mounted gauges for pyro shields and 12 manifold line gauges for pilot cylinders, to ensure accuracy and conformity with SANS 14520 tolerances.
- Service and replace Pyro shield pilot cylinders in accordance with manufacturer-recommended intervals, ensuring that all associated flexible hoses are replaced concurrently and that no hose exceeds a maximum service life of 10 years.

3.2. Objectives

- Ensure legal compliance with the Pressure Equipment Regulations under the OHS Act.
- Maintain the operational integrity and reliability of the fire suppression systems protecting essential electrical infrastructure.
- Prevent system failure due to expired or untested cylinders, which could lead to increased fire risk and costly downtime.
- Ensure all work is executed by qualified professionals in accordance with national standards (SANS 14520) and industry regulations (SAQCC Fire).
- Facilitate minimal operational interruption during the removal and reinstallation processes.

3.3. LOCATION AND SITE ACCESS

The fire suppression systems are installed within the Port of Port Elizabeth. Access to these systems by contractors shall be subject to the issuance of the necessary permits, which will be authorized by the designated Technical Supervisor. The systems are located at the following specific sites:

- 3.3.1. Main intake substation
- 3.3.2. Main Substation (Charl Malan Quayside)

3.4. WORKING HOURS

- Working hours shall be limited to standard business days, specifically Monday to Friday, between 08h00 and 16h00. No provision will be made for overtime work.
- The Service Provider shall not amend or deviate from the stipulated working hours unless expressly instructed to do so in writing by the appointed Project Manager.

3.5. COMPLAINTS

- The Contractor must comply and ensure that he/she complies with all applicable legislation including the Occupational Health and Safety Acts, equal opportunity legislation, road traffic acts, transport acts, registered workplace agreements of employer-employee agreements, the Safety, Health and Environment (SHE) requirements and all lawful direction of the TNPA representative applicable to the contract.

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- The Contractor must obtain all necessary permits, licenses and approvals, give all notice required to be given and pay all applicable relevant fees in connection with the contract and provide evidence of compliance to the TNPA or the TNPA's representative on request.
- The Contractor shall comply with the Port of Port Elizabeth's SHEQ regulations and requirements.

3.6. PARKING AND VEHICLES

- Parking shall be permitted in any designated open parking area. All vehicles used for personnel and equipment transport must be clearly marked and identifiable as site vehicles.
- Parking is undertaken entirely at the vehicle owner's risk. Transnet National Ports Authority (TNPA) shall not be liable for any loss or damage incurred while vehicles are parked on the premises.

3.7. GENERIC PRICING INSTRUCTION

- Pricing assumptions refer to the set of criteria outlined below, which must be read in conjunction with all sections of this specification document. It shall be deemed, for the purposes of the contract, that the contractor has duly considered these assumptions in the formulation of their rates and overall pricing.

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4. BILL OF QUANTITIES

Item No.	Ref.	DESCRIPTION	Unit	QTY	RATE	Total Amount
		This BOQ shall be read in conjunction with these specifications document				
1	3.5	Supply of the TNPA approved safety file	Each	1		
2		Scope of Works				
2.1	3.1	Replace discharge and actuation hoses at Main Intake Substation	each	86		
2.2	3.1	Replace discharge and actuation hoses at Charl Malan Quayside Substation	each	87		
2.3	3.1	Main intake substation Pyro Shield Cylinder 80ltr	each	80		
2.4	3.1	Main Substation Pyro Shield Cylinder 80ltr (Charl Malan Quayside)	each	81		
2.5	3.1	Main intake substation gauges calibration	each	86		
2.6	3.1	Main Substation (Charl Malan Quayside) gauges calibration	each	87		
2.7	3.1	Supply Pressure Test HPT Certificates for all Cylinders	each	1		
3		SUB TOTAL				
4		Add 15% VAT				
5		TOTAL				