

	Instruction	Hendrina Power Station
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Title: **Scope of Work for Refurbishment of Oil Burner 3-way Isolating Valves**

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1. INTRODUCTION

This document defines the contract works to be executed by the successful bidder, of which is evaluated and selected using the open tender process. The Scope of Work (SOW) for this contract entails the repair and refurbishment requirements of 3-way isolating valves for the oil burner plant at Hendrina Power Station for a period of 5 years.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope comprises of, but is not limited to, the repair, refurbishment, and transportation of all required components, including the valve and internals as a whole/unit. All spares supplied must be accompanied by quality control documentation.

2.1.1 Purpose

The purpose of this scope of work is to outline all the spare materials required, the contract work to be performed by the contractor, and the responsibilities of all parties involved. The contract scope of work serves to support the tender technical evaluation process.

2.1.2 Applicability

This document is applicable to Hendrina Power Station.

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] 240 – 168966153: Generation Tender Technical Evaluation Procedure
- [2] 240 – 48929482: Tender Technical Evaluation Procedure
- [3] Eskom Standard QM-58, Supplier Contract Quality Requirements Specification
- [4] 32 – 1033: Eskom Procurement and Supply Chain Management Policy
- [5] 32 – 1034: Eskom Procurement and Supply Chain Management Procedure
- [6] 240 – 105691858: Materials Management Safe Work Procedures Transportation Requirements for Material Handling

2.2.2 Informative

- [7] Occupational Health and Safety Act Number 85 of 1993
- [8] ISO 9001 Quality Management Systems

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2.3 DEFINITIONS

Abbreviation	Description
Contractor	Service provider contracted to supply a specific service to Eskom Hendrina Power Station. Used interchangeably with the term Supplier.
Employer	The organization (Eskom) to which the supplier will be contracted for this tender and contracts that may result therefrom
Employer's Premises	Hendrina Power Station
Industrial Storage Facility	Physical space suitable for the storage of the items specified in the scope of work
Returnable	Document submitted by tenderer for evaluation in support of tender bid
Spares	Parts that can be used for replacement, including the whole pump as a unit.

2.3.1 Classification

Controlled Disclosure: Controlled Disclosure to external parties (either enforced by law, or discretionary).

2.4 ABBREVIATIONS

Abbreviation	Description
FPT	Female Pipe Thread
kPa	Kilopascal
m	Metre
mm	Millimetre
MPa	Megapascal
MPT	Male Pipe Thread
OD	Outer Diameter
OEM	Original Equipment Manufacturer
IN	Inch
QCP/QIP	Quality Control Plan / Quality Inspection Plan
PS	Power Station
PTW	Permit to Work
SOW	Scope of Work

2.5 ROLES AND RESPONSIBILITIES

2.5.1. The Employer

The responsibilities of the employer include the following:

- Inform the contractor when a batch of valves need to be attended to.
- Provide information of operations prior to refurbishment, repair, or overhaul.
- Make all necessary arrangements, including permit to work (PTW), for the contractor to gain

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site access and perform work required.

- d) Send a representative to the contractor's premises/workshop if there are any inspection, witness, or hold points.

2.5.2. Contractor

The responsibilities of the contractor include the following:

- e) Comply with the employer's environmental, health, and safety standards, policies, and procedures.
- f) Make all repair/refurbishment information available to the employer on request.
- g) Inform the employer's representative at least 48 hours prior to any hold points that may require the employer.

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

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3. SCOPE OF WORK

The contractor's scope of work includes refurbishment of the valves as listed in *Table 1*, as well as the following:

3.1 VALVE DESCRIPTION

Table 1. Valve Description

Material No.	Short Description	Long Description	Quantity
0745237 (refurbish)	VALVE:3 PORT; ¾ AND ½ IN; 6 MPA; 250	VALVE: TYPE: 3 PORT; VALVE SIZE: ¾ AND ½ IN; DESIGN RATING: 6 MPA; TEMPERATURE RATING: 250 DEG C; FACE TO FACE LENGTH: Faces at 90 DEG; CONNECTION: PNEUMATIC 1/4 INCH. HYDRAULIC ¾, ½ INCH; OPERATED: PNEUMATIC; BODY MATERIAL: BRASS (A105N); STYLE: 3-PORT SLIDING STEM VALVE; SPECIFICATION: ASME B16.34 AND ASME B31.3; SPECIAL FEATURES: UNCOMMON. SAMPLE MUST ALWAYS BE PROVIDED; FACES AT 90 DEGREES	144 (+ 24 per year)

3.2 IDENTIFICATION AND REMOVAL

- Identify Valve serial number and record on check sheet.
- Transport valves from the Employer's stores to the Contractor's workshop.

3.3 STRIP AND INSPECTION

- Submit a QCP to the Employer for the Employer's QC personnel and the Engineer to include intervention points and approve the QCP prior to commencement of any work.
- Clean valve externally prior to stripping the valve.
- Strip the valve and conduct a dirty inspection on all the internal components of the valve.
- Clean the inner components: Viton O rings, set metal compression ring, plunger, piston, etc.
- Clean the hydraulic input and output pipe plugs.
- Clean the hydraulic pipe plug to the recirculating tank.
- Clean the air line pipe plug.
- Check the correct size of all the components and record them on log sheet. (Nuts, Inner Spring, Housing, Valve body, Flanges, Gasket, Viton O rings, piston, set metal compression ring).
- Inspect for cleanliness.
- Conduct a clean on all the internal components of the valve.
- Perform visual inspection of valve external.

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- Generate an inspection report and send to Employer's QC and Engineering departments.
- Submit a method statement (include refurbishment, assembling, and testing of the valves) for specific valves to the Employer's QC and Engineering Departments for approval.

3.4 REPAIRS

3.4.1 REFURBISHMENT

- Refurbish components as per approved method statement.
- Check for damage on Nuts, Inner Spring, Housing, Valve body, Flanges, Gasket, Viton O rings, piston, and set metal compression ring.
- Polish and lap shaft.

3.4.2 ASSEMBLY

- Inspect all components for cleanliness.
- Replace all damaged components such as Nuts, Inner Spring, Housing, Valve body, Flanges, Gasket, Viton O rings, piston, and set metal compression ring.
- Blue checks of seats.
- Ensure correct fitting of all components based on correct sizes (Nuts, Inner Spring, Gasket, Viton O rings, piston, set metal compression ring).
- Final assembly of valve.

3.5 PRESSURE TEST

- Pressure test the refurbished valve at 40 bar hydraulic pressure and 6 bar air pressure as per the approved method statement.
- Pressure tests to be done in the presence of Eskom QC and Engineering at the Contractor's premises.
- Pressure test certificate to be issued.

3.6 HANDLING AND TRANSPORTATION

- Ensure that the valve is free of the pressure test fluid and any inherent moisture thereof.
- Preserve the valve and transport it to the Employer's stores, accompanied by a delivery note.
- The employer's Materials Management Safe Work Procedures Transportation Requirements for Material Handling (listed in normative [6] in 2.2.1) to be adhered to at all times during the handling and transportation of the valves.

3.7 GENERAL REQUIREMENTS

- The refurbishment of the Oil Burner 3-way valves will be on an as and when required basis subject to approval of both the Employer and the Contractor.

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