Eskom	Strategy	Majuba Power Station

Title **Majuba Power Station Tender Technical Evaluation for the Capability Assessment of Service Providers for the Refurbishment of Boiler Isolating Valves**

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Compiled by	Functional Responsibility	Authorised by
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Date: 24/08/2023	Date: 24/08/2023	Date:
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TABLES

1. INTRODUCTION

The purpose of this document is to outline the scope of work that is required to overhaul boiler isolating valves at Majuba Power Station and the Technical evaluation strategy to be followed in acquiring such external services. The scope of work also entails the contractor to supply the required soft spares (ie gasket, pressure seal and packings) during the refurbishment process.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of work entails the following aiming at refurbishment of boiler isolating valves at Majuba Power Station to OEM specifications and testing to meet operational requirements:

All soft spares will be supplied by the contractor and should be in accordance to the OEM requirements/specification.

- The contractor develops and submits QCP for approval by the end user – System Engineer prior to commence of any activities in the Works Information/Scope of Work issued.
- When submitting the QCP, the following procedures are required based on scope of works and type of control valve being worked on:
  - Stripping procedure
  - Inspection procedure
  - Repair procedure
  - Assembly procedure
  - Inspection and dimension check sheets
- Visual Inspection (internal and external valve body and components) to be carried out together with Eskom and contractor Quality Inspector. Take photos if necessary. The inspection check sheet/ or report to be completed per valve and shared with the System Engineer for recommendations.
- Valves to be visually inspected or NDT to be done by onsite contractor if necessary. All relevant control sheets must be completed (signed by both Eskom's and Contractor's Quality Inspector).
- Valve spindles to be inspected for scoring, pitting and erosion and surface crack tested (NDT) and conduct dimensional checks. Perform spindle run out test if necessary (report to be available). Spindle seating area to be lapped or if spindle is bent it must be replaced.
- Valve body seat to be inspected for scoring, pitting and erosion and surface crack tested (NDT). Depending on the nature of damage of the valve body seat, if the valve seat cannot be further lapped; replacement of valve seat is a preferred method.

- All gland retaining studs and nuts to be removed and visually inspected. All studs and nuts to be of same dimension with respect to the valve.
- Valve gland retaining nuts and studs are to be removed and inspected for damage to threads, corrosion and stretching of studs. Replace if damaged or out of specification.
- Studs holes to be inspected for thread damage and repaired as required. All nuts to be free and not seized on studs. When a valve is assembled, ensure that washers or springs are in place and (at least 3-4 threads is exposed on the studs when nuts are tightened).
- Special attention to be paid to gasket sealing areas. Gaskets are to be checked to conform to the recommended material with respect to temperature and pressure rating per valve. Ensure correct gasket dimensions.
- Ensure that the correct spring coupling material and stiffness index is adhered too when replacing the spring.
- Check for any physical damage (cracks, deformation, blockage) on the perforated cages, report to System engineer for recommendation.
- The contractor is to provide secure storage for all valve components. The contractor at his own cost will replace lost components.
- The contractor shall provide a technical report of the inspection findings and repairs conducted on every valve. The report should as a minimum include the following:
    - The initial condition of the valve after stripping – report on debris, wear, and defects noted on the valves and associated components.
    - The repairs/replacements conducted to restore the valves mechanical integrity
    - Measured dimensions vs. allowable tolerances
    - List of recommended actions and/or spares for the next overhaul
    - Photographs of all notable defects
- The following activities are the minimum activities expected to be carried out by the Contractor, the actual list can only be done after inspections. There are other activities that will be done but are depending on the inspection and before doing they must be confirmed with the Project Manager for time and cost.
- No valve or valve component to leave site without the authorization from the Project Co-ordinator, issuing a gate release document.

Completion

In accordance with the Works Information, the works are completed by the Completion Dates as per the latest agreed programme between Employer and Contractor.

Data pack to be provided with electronic copies to the Project Manager, System Engineer and the document centre for storage.

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and TET member responsibilities for tender technical evaluation. The technical evaluation strategy serves as basis for the tender technical evaluation process.

2.1.2 Applicability

This document shall apply to Majuba 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] 240-48929482 Tender Technical Evaluation Procedure.

2.2.2 Informative

Not Applicable

2.3 DEFINITIONS

Definition	Description
Refurbishment/Overhaul	The refurbishment or overhaul is the servicing of valves to OEM specification.
Tender	A tender refers to a written competitive offer, quotation, proposal made by the supplier in a prescribed or stipulated form in response to an invitation to tender/competitive enquire for provision of assets/goods or services and or the disposal thereof.

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
OEM	Original Equipment Manufacturer
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

Not Applicable

2.7 RELATED/SUPPORTING DOCUMENTS

Not Applicable

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Sipho Masondo	Senior Engineer, Majuba PS Boiler Engineering
TET 2	Ntokozo Nyathi	System Engineer, Majuba PS Boiler Engineering
TET 3	Lindani Madonsela	Boiler Engineering Line manager, Majuba PS Boiler Engineering
TET 4	Lulama Matiwana	Boiler Outage Execution Manager

3.3 CRITERIA

3.3.1 Mandatory Technical Evaluation Criteria

Table 2: Mandatory Technical Evaluation Criteria

Eskom	**Technical evaluation for capability assessment of service providers for the refurbishment/repair of boiler isolating valves in Eskom Majuba power station, Score card**		
Section A - MANDATORY REQUIREMENTS	**OBJECTIVE EVIDENCE TO BE PRODUCED**	**Criterion achieved Yes/No**	**COMMENT / REMARK**
CIDB ME Grade 5 or Higher	Documented proof of CIDB grading		**Applicable to all service providers**
Evaluation of workshop for offsite repairs if compliant with welding workshop and manufacturing capability according to ISO 3834-2	Submit copy of certificate of conformance to ISO 3834 part 2.		**Applicable to all service providers**

3.3.2 Qualitative Technical Evaluation Criteria for Part 1

Section B - QUALITATIVE CRITERIA								
KPI - Criteria Evaluation Indicator	**Weight (%)**	**Minimum Criteria Evaluation Requirements**	**Unit**	**Rating**				**TOTAL RATING**
3.3.2.1 Proof of previous similar work experience on high pressure high temperature valves.	25	The service provider to provide proof of similar work performed in the form of a signed contract or work order. • 0 – If there is no experience • 2 – less than 2 yrs experience • 4 – Between 2 yrs and 5yrs experience • 5 – more than 5 yrs experience	Number	0 (0%)	2 (6.25 %)	4 (12.5 %)	5 (25%)	
3.3.2.2 Qualifications of Key Personnel-Site manager	15	The site manager to be in possession of Minimum national Diploma in Engineering or Grade 12 with project management certification (NQF 6) and 3 years relevant experience. Certified copies of certificates and CV with traceable references • 0 - Nothing is submitted • 2 – Compliant but experience less than 3yrs • 4 – Partial evidence is provided with associated qualifications. • 5 – Fully Compliant	Number	0 0%	2 (5%)	4 (10%)	5 (15%)	
3.3.2.3 Qualifications of Key Personnel-Site Supervisor	15	The site supervisor to be in possession of Minimum Mechanical trade test plus 3 yrs experience including PSR authorisation. Certified copies of certificates and CV with traceable references	Number	0	2	4	5	

		• 0 - Nothing is submitted • 2 – Compliant but experience less than 3yrs • 4 – Partial evidence is provided with associated qualifications. • 5 – Fully Compliant		(0%)	(5%)	(10%)	(15%)	
3.3.2.4 Basic engineering capability, repair and refurbishment control	15	The service provider demonstrates capability to overhaul valves and key activities and required tests (e.g. previous work, Signed QCP's). • 0 - No evidence is provided • 2 – No previous work but QCP,s are provided • 4 – More than 5 previous jobs done and detailed QCP's. • 5 - All documents are submitted	Number	0 0%	2 (5%)	4 (10%)	5 (15%)	
3.3.2.5 Control of inspection, measuring and test equipment	5	The service provider provides demonstrable proof for the control of inspections, measurements and test equipment. • 0 – No proof provided. • 2 – Only procedure provided. • 4 – Previous work measurements and procedure provided. • 5 – Procedure, previous work measurements and test equipment list provided.	Number	0 0%	2 (1%)	4 (3%)	5 (5%)	
3.3.2.6 Scope related repair procedures	20	The service provider to demonstrate full understanding of the scope by providing the following procedures detail with regards to gate valves. ○ Stripping procedure ○ Inspection procedure ○ Repair procedure ○ Assembly procedure ○ Inspection and dimension check sheets • 0 – No procedure provided.	Number	0 0%	2 (10%)	4 (15%)	5 (20%)	

		• 2 – not all procedures provided. • 4 – Procedures provided but not detailed and comprehensive. • 5 – all Procedures submitted, procedures detailed and comprehensive.						
3.3.2.7 Artisan tool kits	5	The service provider shall demonstrate that artisan tool boxes are sufficiently equipped for his scope of capability (Provide a comprehensive tool list for the overhaul of a Gate valve) • 0 - No toolbox • 2 – 30% of the tools required for the task • 4 - 70% of the tools required for the task • 5 – 100% of the tools required for the task	Number	0 0%	2 (1%)	4 (3%)	5 (5%)	

Table 3: Qualitative Technical Evaluation Criteria for Part 1

TET Member Responsibilities for Part 1

Table 4: TET Member Responsibilities for Part 1

Mandatory Criteria Number	TET 1	TET 2	TET 3
CIDB ME Grade 5 or Higher	X	X	X
Evaluation of workshop for offsite repairs if compliant with welding workshop and manufacturing capability according to ISO 3834-2	X	X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**
3.3.2.1 Proof of previous similar work experience on high pressure high temperature valves.	X	X	X
3.3.2.2 Qualifications of Key Personnel-Site manager	X	X	X
3.3.2.3 Qualifications of Key Personnel-Site Supervisor	X	X	X
3.3.2.4 Basic engineering capability, repair and refurbishment control	X	X	X
3.3.2.5 Control of inspection, measuring and test equipment	X	X	X
3.3.2.6 Scope related repair procedures	X	X	X
3.3.2.7 Artisan tool kits	X	X	X

3.4 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.4.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1.	Inadequate or less than required number of core team.

Table 6: Unacceptable Technical Risks

Risk	Description
1.	Unavailable proof of personnel qualification

3.4.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	None

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	None

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Lindani Madonsela	Boiler Engineering Manager	24/08/2023
Sipho Masondo	Senior Engineer, Majuba PS Boiler Engineering	31/08/2023
Ntokozo Nyathi	System Engineer, Majuba PS Boiler Engineering	24/08/2023
Lulama Matiwana	Boiler Outage Execution Manager	23/10/2023 (ACTING)

5. REVISIONS

Date	Rev.	Compiler	Remarks
August 2023	1	Ntokozo Nyathi	First Issue

6. DEVELOPMENT TEAM

The following people were involved in the development of this document:

- See section 4 above

7. ACKNOWLEDGEMENTS

- Sipho Masondo