 Eskom	Strategy	Majuba Power Station
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Title Tender Technical Evaluation for the Capability Assessment of Service providers for the Refurbishment of Turbine Control valves in Eskom Majuba Power Station

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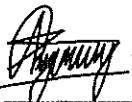

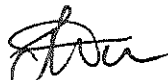

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Content

Page

1	Introduction	3
2	Supporting Clauses	3
2.1	Scope	3
2.2	Completion	4
2.3	Purpose	4
2.4	Applicability	5
2.4.1	References	5
2.5	Classification	5
2.6	Definitions	5
2.7	Abbreviations	5
2.8	Roles and Responsibilities	5
3	Tender Technical Evaluation Strategy	6
3.1	Technical Evaluation Threshold	6
3.2	TET Members	7
3.3	Mandatory Technical Evaluation Criteria	7
Table 2	Mandatory Technical Evaluation Criteria	7
3.4	Qualitative Technical Evaluation Criteria	8
3.5	Tet Member Responsibilities	10
3.6	Foreseen Acceptable / Unacceptable Qualifications	11
4	Authorisation	12
5	Revisions	12
6	Development Team	12
7	Acknowledgements	12

1. Introduction

The purpose of this document is to outline the scope of work that is required to overhaul turbine regulating 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 supply of required soft spares i.e. 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 turbine and boiler regulating 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.

- 2.1.1 The contractor develops and submits QCP for approval by the end user – System Engineer prior to commencement of any activities in the Works Information/Scope of Work issued.
- 2.1.2 When submitting the QCP, the following procedures are required based on scope of work and type of control valve being worked on:
 - a) Stripping procedure
 - b) Inspection procedure
 - c) Repair procedure
 - d) Assembly procedure
 - e) Inspection and dimension check sheets
- 2.1.3 Visual Inspection (internal and external valve body and components) to be carried out together with Eskom and contractor Quality Inspector.
- 2.1.4 Valves to be inspected (NDT or Visual) must first be released by Eskom's Quality Inspector. All relevant control sheets must be completed (signed by both Eskom's and Contractor's Quality Inspector).
- 2.1.5 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 repaired/lapped or replaced if damaged or bent.
- 2.1.6 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.
- 2.1.7 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.
- 2.1.8 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.

- 2.1.9 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)
- 2.1.10 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.
- 2.1.11 Ensure that the correct spring coupling material and stiffness index is adhered too when replacing the spring. NDT (Dye pen) springs to determine if there is any cracks.
- 2.1.12 Check for any physical damage (cracks, deformation, blockage) on the perforated cages, report System engineer for recommendation.
- 2.1.13 The contractor is to provide secure storage for all valve components. The contractor at his own cost will replace lost components.
- 2.1.14 The contractor shall provide a data pack which includes (but not limited to) a comprehensive technical report which includes photographic evidence of the valves internal/external condition and all technical notifications raised. Minimum Camera spec to be used for photographic evidence is 18Megapixels to ensure that the pictures are clear. The report should as a minimum include the following:
- a. The initial condition of the valve after stripping – report on debris, wear, and defects noted on the valves and associated components
 - b. The repairs/replacements conducted to restore the valves mechanical integrity
 - c. Measured dimensions vs allowable tolerances
 - d. List of recommended actions and/or spares for the next overhaul
 - e. Photographs of all notable defects
- 2.1.15 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.
- 2.1.16 No valve or valve component to leave site without the authorization from the Project Co-ordinator, issuing a gate release document.

2.2 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.

2.3 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.

2.4 Applicability

This document applies to Majuba Power Station

2.4.1 References

[1] 240-48929482 Rev 1 Tender Technical Evaluation Procedure

2.5 Classification

Public domain: published in any public forum without constraints (either enforced by law, or discretionary)

2.6 Definitions

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

2.7 Abbreviations

Abbreviation	Description
MCW	Main Cooling Water
TETM	Technical evaluation team member
QCP	Quality Control Plan
TET	Technical Evaluation Team

2.8 Roles and Responsibilities

As per 240-48929482 rev1 Tender Technical Evaluation Procedure

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%. Should no Contractor meet the minimum threshold of 70% Eskom reserves the right to negotiate and/or consider Contractors that obtained between 65% and 69%
- If the tender returnables are not provided the scoring for the specific criteria shall be zero as described in Table 1 Scoring of Qualitative Criteria. If the mandatory requirements are not submitted the tender shall be seen as non-responsive and the Qualitative evaluation will not be done

Table 1 Scoring of Qualitative Criteria

Score	(%)	Definition
5	100	COMPLIANT <ul style="list-style-type: none"> • Meet technical requirement(s) AND, • No foreseen technical risk(s) in meeting technical requirements
4	80	COMPLIANT WITH ASSOCIATED QUALIFICATIONS Meet technical requirement(s) with, <ul style="list-style-type: none"> • Acceptable technical risk(s) AND/OR • Acceptable exceptions AND/OR, • Acceptable conditions
2	40	NON-COMPLIANT <ul style="list-style-type: none"> • Does not meet technical requirement(s) AND/OR • Unacceptable technical risk(s) AND/OR, • Unacceptable exceptions AND/OR, • Unacceptable conditions
0	0	TOTALLY DEFICIENT OR NON-RESPONSIVE

3.2 TET Members

Technical evaluation will be done by the member listed on table below

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	MI Mgenge	System Engineer
TET 2	Bilal Cassim	System Engineer
TET 3	Musa Makhoba	Turbine Auxiliaries Engineer, Turbine Engineering

3.3 Mandatory Technical Evaluation Criteria

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Motivation for use of criteria
1	The service provider provides demonstrable evidence that the company has been in the valve maintenance, repair, and refurbishment business for a period of not less than 2 years	Ensure the contract has the required experience for execution of the work

3.4 Qualitative Technical Evaluation Criteria

Table 3: Qualitative Technical Evaluation Criteria

No#	Qualitative Technical Criteria Description	Criteria Weight (%)	Scores			
			0	5	10	12.5
	Actual scores		0	5	10	12.5
1	Refurbishment of Turbine control valves	100	0	2	4	5
1 1	The service provider to provide an organogram clearly defining the roles and responsibilities in the management hierarchy	12.5	no organogram submitted	organogram is submitted but qualifications not submitted	organogram is submitted but some qualifications are outstanding	organogram is submitted with all the relevant qualifications
1 2	The service provider provides demonstrable evidence of the available human resources (Core team) including qualifications (trade certificates for Artisans) and levels of experience	12.5	Nothing submitted	No evidence provided	Partial evidence is provided	All evidence and qualifications are provided
1 3	The service provider demonstrates capability to overhaul valves and key activities and required tests (e.g previous work, QCP's)	12.5	No evidence is provided	No previous work but QCP,s are provided	More than 5 previous jobs service reports and detailed QCP's	All documents are submitted

14	The service provider demonstrates his receiving inspection controls by using the arrival of a spare component from the Client/Employer as an example	12.5	No response	Only previous records are supplied	only Procedure is supplied	Both procedure and previous work records are supplied
15	The service provider provides a procedure for storing soft goods and allows access to the various storage areas	12.5	No procedure			Signed Procedure
16	The service provider provides copies of inspection, test and measurements records	12.5	No documents provided	Only one of the three reports provided	Two of the three reports provided	All three reports are provided
17	The service provider provides demonstrable proof of valve basic training interventions The service provider provides procedures for the work to be executed	12.5	No training at all	provide training proof older than 10 years	Provide training no older than 5 years	Provide training no older than 3 years
18	The service provider provides procedures for the work to be executed	12.5	No procedure	1 Procedure	2 Procedure	3 Procedure
		TOTAL =100				

3.5 Tet Member Responsibilities

Table 4: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3
1	X	X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3
11	X	X	X
12	X	X	X
13	X	X	X
14	X	X	X
15	X	X	X
16	X	X	X
17	X	X	X
18	X	X	X

3.6 Foreseen Acceptable / Unacceptable Qualifications

Table 5: Acceptable Technical Risks

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

Table 2: Unacceptable Technical Risks

Risk	Description
1	Unavailable proof of personnel qualification

Table 3: Acceptable Technical Exceptions / Conditions

Risk	Description
1	None

Table 4: Unacceptable Technical Exceptions / Conditions

Risk	Description
1	None

4. Authorisation

This document has been seen and accepted by

Name	Designation
B Cassim	Condensate System Engineer
M Makhoba	Turbine Auxiliaries System Engineer

5. Revisions

Date	Rev.	Compiler	Remarks
March 2021	1	MI Mgenge	First issue

6. Development Team

The following people were involved in the development of this document

- B Cassim
- M Mgenge

7. Acknowledgements

None