

Title: **Boiler and Turbine Valves
Refurbishment Tender
Technical Evaluation Strategy**

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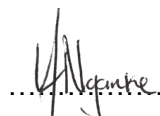
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1. INTRODUCTION

The intend of this document is to align Procurement Process at Kendal Power station on how the bidders will be assessed based on the technical requirements for Boiler and Turbine cut out valves refurbishment.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document discusses the different technical aspects that will be evaluated and scored by the multi-disciplinary Technical Evaluation Team (TET) to complete the technical evaluation for Kendal Power Station Boiler and Turbine Valves refurbishment. The team members who will be involved in the evaluation are listed and appointed in this document along with their responsibilities. This document also describes the acceptable and unacceptable risks and qualifications and/or conditions that will be applicable to the Scope of Work. Once the Technical Evaluation Strategy is authorised, no changes will be made to the evaluation criteria without the appropriate authorisations.

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 applies to Kendal 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] ISO 9001 Quality Management Systems.
- [3] ISO 9001 Quality Management Systems.

2.2.2 Informative

- [4] 240-142257054: Technical Evaluation Standard for the Capability Assessment of Service Providers for the Refurbishment of Valves and Fittings in Eskom Coal Fired Power Plants.

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2.3 DEFINITIONS

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
CV	Curriculum Vitae
N/A	Not Applicable
QMS	Quality Management System
PTS	Points
SWL	Safe Working Load
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

N/A as per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

- [5] [11] 240-53716746: Tender Technical Evaluation Report
- [6] [12] 240-53716712: Tender Technical Evaluation Results Form
- [7] [13] 240-53716726: Tender Technical Evaluation Scoring Form
- [8] [14] 240-53716769: Tender Technical Evaluation Strategy Template

2.8 TECHNICAL EVALUATION THRESHOLD

Mandatory Technical Evaluation Criteria (gatekeepers) are 'must meet' criteria. These criteria shall not be weighted or point scored, but shall be assessed on a Yes/No basis as to whether or not the criteria are met unless set otherwise. An assessment of 'No' against any criterion shall technically disqualify the tenderer and shall not be further evaluated against Qualitative Criteria.

Qualitative Technical Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer after determining that all the Mandatory Evaluation Criteria have been met. The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion. The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

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2.9 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Saydo Maseko	Boiler System Engineer
TET 2	Fulufhelo Nganke	Boiler System Engineer
TET 3	Johan Vos	Senior Supervisor Tech Maintenance
TET 4	Sipho Mkhabela	Senior Turbine Engineer (Pr. Eng.)
TET 5	Raymond Nkosi	Turbine System Engineer
TET 6	Tendani Rasivhetshele	Act. Boiler Engineering Manager (Moderator)

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2.10 MANADATORY TECHNICAL EVALUATION CRITERIA

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1.	Welding Accreditation	Provide demonstrable proof of the applicable ISO 3834 part 2, certification. In case of subcontracting supply the subcontractor accreditation. Provide valid certified copies of the certificate of accreditation.	To ensure adequate technical competencies of the personnel and process.
2.	Non-conformity Management	Provide company`s non-conformity/NCR reporting procedure.	To ensure non-conformities are addressed adequately and timeously.

2.11 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 3: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Technical capability on valve refurbishment		Tender Returnable	30	
	1.1	Method statement	Provide a method statement for refurbishment of each type of valve (refer to scope of work), including resource organogram for resources that will be executing the scope of work.		20
	1.2	Description of workshop equipment required to complete the refurbishment scope of work	Provide a controlled list/ register of own equipment and tools expected for the use of any repairing/ refurbishing of valves including the equipment identification/serial number. In case of outsourcing for a portion of scope, it must be stated in writing that the company is committed to execute the scope and will make use of a third party		5
	1.3	Handling, Storage, Tagging and Preservation procedure.	Provide a handling, storage and tagging and preservation procedure.		5
2.	Workshop Technical Assessment – Workshop Visit		Tender Returnable N.B: Only service providers that get a minimum total weighted score (threshold) of 40% in all the other criteria's will qualify for Workshop Visit.	30	
	2.1	Repair and Refurbishment Equipment and Tools	Provide demonstrable evidence with regards to the availability of the following:		

			<ul style="list-style-type: none"> - Lathe with swing diameter over bed of 700mm and minimum distance between diameters of 1.8 m as a minimum specification. - Milling machine. - Pedestal drilling machine (drill press) with maximum hole diameter of 50 mm. - Pedestal or bench grinder with minimum grinding disc diameter of 200 mm. - X 2 General application lapping machines and lapping tables capable of lapping valve body seat diameters up to 400 mm. - Lifting equipment and crane capacity with minimum SWL of 3 tons. - Pressure testing equipment capable of testing at test pressure up to 388 bars and valves size diameter up to 750 mm. 		16
	2.2	Workshop Layout and Capacity Demonstration	<p>Provide demonstrable evidence that the workshop facility is set up for the safe execution of the following activities:</p> <ul style="list-style-type: none"> - Valve disassembly and cleaning - Valve assembly - Surface blast cleaning - Painting and coating - Segregation (quarantine) area for items subjected to non-conformance. - Welding area 		6
	2.3	Handling and Storage	Provide demonstrable evidence of controlled areas for storage of the various materials, components and consumables.		3
	2.4	Control of Measuring and Test Equipment	Provide demonstrable evidence confirming the calibration of test and measuring equipment. If outsourced is the metrology		5

			laboratory SANAS approved. Provide proof of the calibration interval for test and measuring equipment.		
3.	Personnel CVs	Tender Returnable	25		
	3.1	Highest qualification	<p>Minimum resource requirements to include the following:</p> <ul style="list-style-type: none"> - X1 Technician with an N6/ National Diploma (Mechanical Engineering) as a minimum - X1 Quality Control Inspector with an N6/ National Diploma and QC certification as a minimum - X2 Valve Supervisors with a Trade Test as a minimum - X3 Qualified Fitters with Trade Test as a minimum - X3 Semi- skilled Fitters with Grade 10 or 5 years valve repair experience as a minimum <p>Note: All CV's to be accompanied with valid certified copies of Identity Documents and proof of qualifications.</p>		5
	3.2	Related Experience	<p>Provide details of company worked for, duration, roles & responsibility and work done. Minimum required experience is as follows:</p> <ul style="list-style-type: none"> - Technician with minimum valve related experience of 2 years - Quality control inspector – minimum of 5 years valve related experience - Valve Supervisors – minimum of 5 years valve related experience - Qualified Fitters – minimum of 3 years valve related experience - Semi-skilled Fitters – minimum of 2 years valve related experience (those with grade 10) or 5 years valve experience. <p>Note: Experience will only be considered provided the personnel met the minimum qualification requirements.</p>		10

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	3.3	Valve Maintenance Training	Provide valid certified valve maintenance training certificates. Minimum of three individuals trained (three certificates).		5
	3.4	PER and SANS 347	Provide certified valid PER and SANS 347 training certificates for senior technical and supervisory personnel.		5
4	Quality Control (Execution)		Tender Returnable	10	
	4.1	QCP and Check Sheets	Supply samples of QCP and check sheets specific for each valve type refurbishment.		10
5	Company Experience – Similar Work		Provide records for experience in performing valve refurbishment detailing company name, contact details (landline) of reference, and duration of contract.	5	
				TOTAL: 100	

Table 4: Qualitative Technical Evaluation Criteria Scoring

Criteria Number	Score Percentage Description
1-2	<p>5 (100% of weight) COMPLIANT</p> <ul style="list-style-type: none"> • Meet technical requirement(s) AND; • No foreseen technical risk(s) in meeting technical requirements. <p>4 (75% of weight) COMPLIANT WITH ASSOCIATED QUALIFICATIONS</p> <ul style="list-style-type: none"> • Meet technical requirement(s) with; • Acceptable technical risk(s) AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions. <p>2 (40% of weight) NON-COMPLIANT</p> <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. <p>0 (0% of weight) TOTALLY DEFICIENT OR NON-RESPONSIVE</p>
3	<p>3.1 Qualifications (Total = 6 points)</p> <p><u>Technician</u></p> <ul style="list-style-type: none"> - Does not have the required minimum qualification – 0pts - Has the required minimum qualification – 1 pts <p><u>Quality Control Inspector</u></p> <ul style="list-style-type: none"> - Does not have the required – 0 pts - Has the required minimum qualification – 1 pts

Valve Supervisors

- Supervisors without the requires minimum qualification – **0 pts**
- One Valve Supervisor with the required minimum qualifications – **0.5 pts**
- Two (2) Valve Supervisor with the required minimum qualifications – **1 pts**

Qualified Fitters

- Fitters with no Trade test certificate – **0 pts**
- Less than 3 fitters with trade certificate – **0 pts**
- At least three fitters with trade certificates – **2 pts**

Semi-skilled fitters

- Semi-skilled fitters with no minimum required qualifications – **0 pts**
- Less than three semi-skilled with the required minimum qualifications – **0 pts**
- At least three semi – skilled with the required minimum qualifications – **1 pts**

3.2 Related Experience (Total = 14 Points)

Technician

- Valve related experience < 3 years – **0pts**
- Valve related experience ≥ 3 years – **3 pts**

Quality Control Inspector

- Valve related experience < 5 years – **0pts**
- Valve related experience ≥ 5 years – **3 pts**

Supervisors

- Valve related experience less than 5 years related experience – **0pts**
- One Supervisor with valve related experience ≥ 5 years – **1.5 pts**
- Two Supervisor with valve related experience ≥ 5 years – **3 pts**

Qualified Fitters

- Qualified fitter with < 3 years valve related experience – **0pts**
- One Qualified fitter with ≥ 3 years valve related experience – **1.5 pts**

	<ul style="list-style-type: none"> - Two Qualified fitter with ≥ 3 years valve related experience – 3 pts <p><u>Semiskilled fitters</u></p> <ul style="list-style-type: none"> - Does not have the minimum required experience – 0 pts - Less than three semi-skilled fitters with the required minimum experience – 0 pts - At least three semi-skilled fitters with the required minimum experience – 2 pts <p>3.3 Valve Maintenance Training (Total = 5 Points)</p> <ul style="list-style-type: none"> - Less than 3 training certificates – 0 pts - 3 training certificate – 2.5 pts - More than 3 training certificate – 5 pts <p>3.4 PER and SANS 347 Training</p> <ul style="list-style-type: none"> - No training certificate – 0 pts - One training certificate – 2.5 pts - More than one training certificate – 5 pts
4	<p><u>4.1 QCP Samples (total = 10 points)</u></p> <ul style="list-style-type: none"> - QCP that is general and not specific to each valve type – 0 pts - QCP that are specific to each valve type, but only partially covers the scope and does not have intervention points such as Hold, etc. – 3 pts - QCP that are specific to each valve type, covers the scope and does not have intervention points such as Hold, etc. – 5 pts - Comprehensive QCP that are specific to each valve type, covers the whole scope with intervention points such as Hold, etc. – 10 pts
5	<p>Company Experience (Total = 5 points)</p> <ul style="list-style-type: none"> - No previous purchase order/ contract – 0 pts - One previous purchase order/contract – 1 pts - Two previous purchase orders/contract – 2.5 pts - Three previous purchase orders/contract – 5 pts

2.12 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5
	X	X	X	X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X

2.13 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

2.13.1 Risks

Table 6: Acceptable Technical Risks

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Table 7: Unacceptable Technical Risks

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

2.13.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

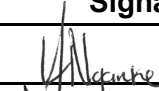



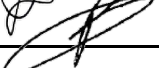

Risk	Description
1.	
1.	
2.	
3.	
4.	
5.	
6.	

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	
2.	
3.	
4.	
5.	
6.	
7.	

3. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Fulufhelo Nganke	Boiler System Engineer	
Saydo Maseko	Boiler System Engineer	
Sipho Mkhabela	Senior Turbine Engineer (Pr.Eng)	
Johan Vos	Senior Supervisor Tech Maintenance	
Raymond Nkosi	Turbine System Engineer	
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4. REVISIONS

Date	Rev.	Compiler	Remarks
April 2021	01	Fulufhelo Nganke	Document required for technical evaluation.
April 2022	02	Fulufhelo Nganke	Revised mandatory and qualitative criteria.

5. DEVELOPMENT TEAM

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

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6. ACKNOWLEDGEMENTS

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