Eskom	Strategy	Medupi Power Station

Title: **Tender Technical Evaluation Strategy for Medupi Power Station MPS265 Main Mill Gearbox Refurbishment**

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Compiled by	Functional Responsibility	Authorised by
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TABLES

1. INTRODUCTION

The technical evaluation strategy if for the refurbishment of KPV 1750 S Gearbox of an MPS265 vertical spindle mill.

2. SUPPORTING CLAUSES

2.1 SCOPE

This tender technical evaluation strategy refers to the services required for the refurbishment of KPV 1750 S Gearbox of MPS265 vertical spindle mill. The evaluation of each tender is conducted by appointed members of a technical evaluation team (TET). The criteria for the technical evaluation as part of this strategy includes:

a) Mandatory evaluation criteria

b) Qualitative evaluation criteria

c) Factory assessment evaluation criteria

d) TET member responsibilities

e) Acceptable and unacceptable qualifications

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 is intended for, and shall be applicable to, Medupi Power Station Generation Division. Within the Business Unit, it may be used all relevant stakeholders involved with the technical tender evaluation process for the refurbishment of Medupi Mill Gearboxes.

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] 32-1034: Eskom Procurement and Supply Chain Management Procedure

[3] 32-1033: Eskom’s Procurement and Supply Chain Management Policy

2.2.2 Informative

[4] ISO 9001 Quality Management Systems

[5] 241-20221240 Medupi Power Station Refurbishment Scope of work for KPV 1750 S Mill Gearboxes

[6] 240-56063919 Mill Reducer Gearbox Maintenance Guideline

[7] 241-2022339 Medupi Power Station Quality Control and Verification

[8] 240-83539994 Standard for Non-Destructive Testing (NDT) on Eskom Plant

2.3 DEFINITIONS

Definition	Description
Contractor	Service provider contracted for supplying specific service to Eskom, Medupi Power Station.
Employer	Eskom, or Eskom Medupi Power Station

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
MPS	Mill Pendulum Bowl (translated from Germany to English)
QCP	Quality Control Plan
SOW	Scope of Work
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-168966153: Generation Tender Technical Evaluation Procedure for Generation

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

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%. This is after the Factory Assessment evaluation, which will be conducted based on achieving a minimum of 70% Qualitative score.

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3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Siya Kuzwayo	System Engineer: Mills
TET 2	Phuti Mashita	Senior Supervisor: Mills
TET 3	Kenneth Ndumo	System Engineer: Mills
TET 4	Kgabo Choshi	Maintenance Manager: Boiler

3.3 MANDATORY 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.	ISO 9001: Quality management systems	Proof of current ISO 9001 certification	To ensure a constant supply of quality components on time and an auditable quality process
2.	Proof that the company owns a workshop that is able to refurbish the components and that the company will only use the said workshop to provide the tendered components.	Proof of ownership of workshop OR If a building is rented: a letter with period of rental term from the building landlord needs to be submitted indicating that the building used as a workshop for the company that is tendering	To ensure a constant supply of quality components at the most economical cost
3.	Previous experience with regards to the refurbishment of Gearboxes	Similar products supplied to industry: Signed letter required stating specific products refurbished and supplied in industry containing traceable customer feedback, regarding the use and success of the product in industry	To provide a confidence level that the supplier can execute the scope.
4.	Declaration of Sub-contracting scope of work	If critical work is subcontracted then the names of the sub-contracting companies must be given and the details regarding the specific scope that is being subcontracted, this needs to be disclosed/declared in a letter. If no sub-contractors are used for critical work, that still need to be stated by the supplier in writing.	To provide a confidence level that the supplier can execute the scope

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Reference table:

Score	(%)	Definition
5	100	**COMPLIANT** • 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; • Acceptable technical risk(s) AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions.
2	40	**NON-COMPLIANT** • 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**

Note 1: The scoring table does not allow for scoring of 1 and 3.

Note 2: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.

Table 3: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	**Transport**		**Scope of Work Document 241-20221240 Section 3.1.1**	**5**	
	1.1		Tenderers must submit a proof of vehicles used for the transportation of gearboxes (owned or currently being leased by the company with leasing period and carrying capacity) – The carrying capacity must exceed 1 gearbox tonnage (32 ton)	**100% (5)** – Compliant **0% (0)** – Non-Compliant	5
2.	**Experience of Similar Work**		**Scope of Work Document 241-20221240**	**85**	
	2.1	Failure Analysis	Tenderer to submit a sample of previous failure report that has been signed or acknowledged in writing by a client. The report to have: 1. Findings 2. Failure causes 3. Recommendations	**100% (5)** – Fully Compliant **80% (4) –** 2 out of 3 points **40% (2**) – 1 out of 3 points **0% (0)** – No submission OR report not signed (or acknowledged in writing) by a client	20

	2.2	Previous refurbishment work completed for similar Scope of Work	Three (3) Signed off Technical databooks (data packs) for a similar Scope (32 ton or greater Bevel Planetary Gearbox Refurbishment Scope). Where size of a gearbox is not defined by a default set-up of a databook provided, a separate sheet shall be provided clarifying the tonnages. Note: *Vertical Roller Mill (VRM) Gearbox terminology maybe be used as an alternative.*	**100% (5)** – All 3 databooks reflect similar scope **80% (4)** – 2 databooks reflect Similar scope **40% (2)** – 1 reflect similar scope **0% (0**) – None reflect similar scope OR no submission OR no tonnage indication	30
	2.3	Having completed a full refurbishment scope of Vertical Roller Mill Gearbox	At least one databook of the submitted must reflect the following in <u>one</u> QCP (signed off) : 1) Gear manufacturing (incl. gear cutting and machining) 2) Gear Heat treatment 3) Restoration of Thrust Pads (relining of white metal) 4) Testing and QC (must include Functional test, NDT, and Dimensional Inspection)	**100% (5**) – All 4 points are covered **80% (4**) – 3 out of 4 points are covered (including Functional Testing) **40% (2)** – Out of all phases covered, No Gearbox Functional Testing is included **0% (0)** – non-compliant; OR QCP Not Signed off	35

3.	**Quality Controller (QC) Certification**		**Scope of Work Document 241-20221240**	**10**	
	3.1	QC Personnel with Min Level 2 NDT Certification	Attach valid proof of Certification	100 (5) – Compliant 0% (0) – Non-Compliant	10

Table 4: Factory Assessment

	Factory Assessment – Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	**Lifting Crane**			**5**	
	1.1	Overhead crane for the tendered company	Demonstrate that the facility overhead crane can support greater than 32 tons of load	**100% (5)** – Compliant **0% (0)** – non-Compliant	5
2.	**Service Centres**			**30**	
	2.1	CNC Machining Centres	Demonstrate that precision milling, drilling, and turning of gearbox components can be done at the tendered company workshop.	**100% (5)** – Compliant **0% (0)** – non-Compliant	10
	2.2	Gear Cutting Machine centre, with a specific focus to accommodate internal gear cutting of KPV 1750 S ring gear	• **Hobbing machines** for spur and helical gears. • **Shaping and broaching machines** of internal	**100% (5)** – All machines available in the workshop and specified ring gear	**20**

			gear teeth for the size matching KPV 1750 S ring gear. • **Grinding machines** for gear finishing and accuracy.	cutting will be accommodated **80% (4)** – All machines available in the workshop, but specified ring gear cutting is part of the subcontracted services as per submitted letter of declaration under section 3.3 (machine visually seen) **40% (2)** -All machines available – but the specified ring gear cutting cannot be accommodated **0% (0)** – Gear cutting service cannot be accommodated; OR subcontracting of this scope is not declared as per section 3.3	

3.	**Manufacturing Machinery**			**25**	
	3.1	CNC CMM (Coordinate Measurement Machine) with laser or tactile scanning probe for measurement and generation of complex geometry drawings	Demonstrate working condition	**100% (5) –** Available at the tendered workshop **80% (4)** - Not available, service subcontracted (visually seen) **0% (0) –** Not seen OR non-functional during the visit	10
	3.2	Heat Treatment Facilities	Demonstrate that heat treatment activities can be accommodated. • Carburizing, nitriding, and induction hardening for gear durability. • Controlled atmosphere furnaces.	**100%(5)** – Heat treatment can be done within the tendered facilities **80% (4)** – Heat treatment can only be conducted at the declared subcontracted company facilities (facility visually seen) **0% (0) –** Heat treatment activities cannot be accommodated, OR the facility could not	15

				be accessed during the time of site visit.	
4.	**Functional Testing**			**35**	
	4.1	Driving System set-up	Demonstrate that the testing facility can utilize a direct drive system during the test (not a belt drive system) for the tendered scope	**100% (5)** – Compliant **0% (0)** – non-compliant	5
	4.2	Lube Oil Pump and motor capabilities to accommodate a 8-hour test run	• Pump delivery: 290 L/min and 3 bar pressure (screw pump recommended) • Motor: min 11kW, output speed 1000 RPM	**100% (5**) - Compliant **0% (0)** – Noncompliant OR partial compliant	20
	4.3	Measuring tools	Demonstrate that the following tools are available and in working condition: 1. Vibration Analysers 2. Noise measurement equipment 3. Thermal Imaging Camera 4. Oil flowmeters 5. Pressure sensors	**100% (5)** – All 5 are available and functional **80% (4)** – 4 out of 5 available and functional **40% (2**) – 3 out of 5 available and functional **0% (0**) – Less than 3 available and functional	10
5.	**Lube Oil Analysis Facility**			**5**	
		Oil Analysis and Lubrication Testing	Demonstrate the capability of performing oil analysis OR contractual relationship with the	**100% (5)** – proof provided for capability to perform	5

			oil analysis company (signed contract document should suffice)	analysis (in house or sub-contracted) **0% (0)** – No proof of capability OR contractual relationship not established with oil analysis service company	

3.5 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

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

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 6: Acceptable Technical Risks

Risk	Description
1.	**Supplier has not supplied Eskom before**
2.	**Supplier has never had a 5-year contract term with the similar scope**
3.	

Table 7: Unacceptable Technical Risks

Risk	Description
1.	**Supplier has never worked with Vertical Roller Mill Gearboxes before**

3.6.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	**None**
1.	

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	**The tenderer is not ISO 9001 certified**
2.	

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Kgabo Choshi	Manager Maintenance (Acting)	
Phuti Mashita	Snr Supervisor Tech Maintenance	
Kenneth Ndumo	Engineer Prof Mechanical	pp.

5. REVISIONS

Date	Rev.	Compiler	Remarks
June 2025	0	S. Kuzwayo	First Issue – Gearbox Refurbishment Contract Establishment

6. DEVELOPMENT TEAM

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

- Kgabo Choshi
- Phuti Mashita
- Kenneth Ndumo
- Siya Kuzwayo

7. ACKNOWLEDGEMENTS

N/A