Eskom	Scope of work	Technology

Title:	**Scope of work for supply of new spares AND strip, refurbishment and delivery of Seal Air Fan spares on unit 5 & 6 at Duvha Power Station**	Unique Identifier:	**382-174917**
		Alternative Reference Number:	**N/A**
		Area of Applicability:	**Engineering**
		Documentation Type:	**Scope of Work**
		Revision:	**1**
		Total Pages:	**7**
		Next Review Date:	**N/A**
		Disclosure Classification:	**CONTROLLED DISCLOSURE**

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Date: 2026/03/10	Date: 2026/03/16	Date: 2026/03/16

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1. INTRODUCTION

Duvha unit 5-6 Loesche mills seal air fans supply and refurbishment scope of work to return them to the design base condition.

2. SUPPORTING CLAUSES

2.1 SCOPE

The document covers the works information for the minimum technical requirements for the stripping, assessment, refurbishment, final assembly, Contractor workshop testing, and delivery of the seal air fan spares and supply of the new seal air fan spares for unit 5-6 mills at Duvha Power Station.

2.1.1 Purpose

The purpose of this specification is to achieve the design base supply of new spares and refurbishment outcome from the suitable supplier in the attempt to achieve the best performance output at minimum cost. This is aimed to improve the availability and reliability of seal air fans performance at Duvha Power Station.

2.1.2 Applicability

This document shall apply to Duvha 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] ISO 9001 Quality Management Systems.

[2] QM-58 Supplier Contract Quality Requirements Specification

2.2.2 Informative

2.2.3 Disclosure Classification.

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

2.3 ABBREVIATIONS

Abbreviation	Description
OEM	Original Equipment Manufacturer
QM	Quality Management
NDE	Non-Destructive Examination
NEC3	New Engineering Contract 3

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3. WORKS INFORMATION FOR THE SUPPLY AND REFURBISHMENT OF DUVHA UNIT 5-6 SEAL AIR FAN SPARES COMPONENTS

3.1 DESCRIPTION OF THE WORKS

The works include the supply of new spares, collection of refurbish spares, stripping, inspection, refurbishment, replacement (depending on inspection report), and delivery to site of the following:

- New runner,
- Impeller,
- Shaft,
- Bearings,
- Plumber blocks,
- Grease,
- Couplings and
- Compensators

3.1.1 Component descriptions

1.	**Seal Air Fan**	177353			
1.1	Clean the axle/shaft				
1.2	Inspection of axle/shaft for concentricity and or alignment				
1.3	MPI axle for cracks and linear indications				
1.4	Shot blast the impeller				
1.5	MPI/DPI welds for cracks and linear indications on impellers				
1.6	Repair defected welds and redo MPI/DPI				
1.7	Inspection for impeller runouts both axial and radial				
1.8	Pre balance inspection of impellers				
1.9	Do balancing on a refurbished impeller				
1.10	Supply of bearing-2312K/C3 + H2312 (FAG/SKF)	32518			
1.11	Supply of bearing-2313K/C3 + H2313 (FAG/SKF)	31883			

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1.12	Supply – SE 516-613 Plumber block with double lip seals TSNA 613G (FAG/SKF)	0034982			
1.13	Supply – SE 515-612 Plumber block with double lip seals TSNA 612G (FAG/SKF)	0034983			
1.14	Supply LGHQ 2/18 grease 20L				
1.15	New impeller, each				
1.16	End plate c/w bolts				
1.17	Manufacture of axle				
1.18	Assembly				
1.19	Dynamic balancing				

Note: The complete list of spares is part of the NEC document will quantities for the period of the contract

3.1.2 Seal Air Fan Spares Refurbishment Requirements

The seal air fan spares are to be refurbished as follows:

- Collect damaged/defected spares from Duvha Power Station
- In the presence of Eskom Representative Strip, inspect all internal components for condition
- Carry out a full engineering inspection and confirm all dimensions are correct. Note the dimensions and clearances are proprietary information from the OEM and the client may not have all the drawings.
- Submit a comprehensive engineering report on the condition of each component regarding, but not limited to wear, mechanical damage, overheating, and any out of normal condition observed.
- With the results of the above inspection reports, the Contractor shall prepare a Scope of Work which details the actions required to refurbish the component, ensuring reliable operation when installed on the plant.
- Components that require complete replacement shall be detailed as such in the inspection report and be replaced with new parts in order to maintain the design base. Damaged or Replaced components remain Eskom's assets and shall be delivered together with the refurbished component unless otherwise permitted by Eskom.
- The Contractor shall prepare and submit an Inspection and Test Plan for acceptance by Eskom Engineering and Maintenance representatives. The Inspection and Test Plan shall be broken down into activities that will ensure the quality of the materials and workmanship regarding the refurbishment scope.
- Refurbish the components in accordance with agreed scope of work,
- Re-assemble all the components,
- In the presence of Eskom Representative, Test run the rotating components (fan impellers) to meet requirements balancing and vibration specifications,

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- Calibration certificates of all instruments used during repair and testing
- Transport to site in accordance with acceptable goods handling requirements,
- On delivery of the spare component, submit a complete data pack containing all the relevant documentation pertaining to the refurbishment of that spare item,
- On delivery of new spare items submit all relevant documents with specifications as specified from the item descriptions.

4. WARRANTY PERIOD

Following the delivery of the spare component, which conforms to the Eskom specification, the warranty period shall extend to a period of 12 months after successful commissioning of the equipment.

The Contractor shall be responsible for making good any defect in or damage to any part of the works that may occur during the warranty period that arises from either:

- Defective material
- Any act or omission of the Contractor during the Defects Liability Period.

The warranty shall be limited to all components and workmanship undertaken by the Contractor during the execution of the refurbishment works. However, the material warranty period shall not extend to any free-issue components.

5. QUALITY ASSURANCE

The Contractor is responsible for the control of manufacture in accordance with the applicable sections of Eskom Specification 39:60 Contract quality requirements. This includes but is not limited to:

- The implementation of quality management compliant with QM 58
- Submission of Inspection and Test Plans to Eskom and their appointed inspection authorities for review and approval prior to the commencement of any work.
- Giving appropriate advanced notification of inspection and test to the relevant inspection authorities
- Submission of quality records dossier to Eskom upon completion of the refurbishment work
- Obtaining manufacturing release forms from Eskom before related items are delivered to site.

In addition to the requirements of the Eskom Specification, the Contractor shall ensure that concession requests and where required, rework procedures that impact on drawings and design specifications are submitted to Eskom for approval.

The Contractor shall submit a Quality Plan to Eskom within one week of the contract being placed and in advance of commencement of procurement of refurbishment components.

Representatives of Eskom will visit the Contractor’s works in accordance with the Quality Plan milestones; sign off hold points and to witness important tests.

6. DOCUMENTATION AND INFORMATION REQUIRED

Below is the list of all documents required:

- Refurbishment report

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- Material test certificates
- NDE reports
- Refurbishment programme
- Quality control plan

7. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation	Signature
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Simphiwe Nkutha	Milling Plant Maintenance Supervisor	
Tanganani Tshishonga	Milling Plant Maintenance Technician	

8. REVISIONS

Date	Rev.	Compiler	Remarks
05 March 2026	0	L Nhlabathi	Spares list referred to NEC3 document

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