

 <b>Eskom</b>	<b>Scope of Work</b>	<b>Kusile Power Station</b>
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**Spares Once-off Supply Scope of work**

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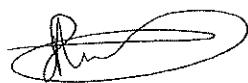
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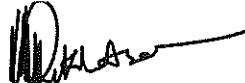
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## 1. Introduction

This document outlines the technical scope of work for establishing a contract to manufacture and supply spares for the Milling Plant at Eskom's Kusile Power Station, including its auxiliaries.

The technical specification and scope of work in this document are limited to the equipment at the Kusile Milling Plant. The scope outlined here does not replace the procurement procedures that will be followed during the procurement process. The scope covers the following plant areas within the milling plant:

- 1) Mill Bunkers
- 2) Mill feeders
- 3) Primary air control dampers
- 4) The mills internals
- 5) Drive motor
- 6) Gearbox
- 7) Hydraulic and lubrication systems
- 8) The classifier
- 9) Reject System
- 10) All valves and Gates
- 11) Pumps
- 12) Seal Air Fans
- 13) PF Piping

## 2. Supporting Clauses

### 2.1 Scope

#### 2.1.1 Purpose

The purpose of this document is to define the technical scope of work for the establishment of a site spares manufacturing contracts with the vetted and approved Panel of Contractors for Kusile Power Station

#### 2.1.2 Applicability

This document shall apply to all commercial units at Kusile Power Station.

#### 2.1.3 Effective date

This document is effective from date of authorisation.

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## 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 References

In the References below several references are made to foreign legislation. For work on Eskom plant the relevant South African Acts and Regulations shall be consulted and applied.

- [1] ISO 9001 Quality Management Systems
- [2] 36-681 Generation Plant Safety Regulations
- [3] 32-727 SHEQ Policy
- [4] Kusile Spares Strategy Template, 240-88368124
- [5] Mandatory Spare, Wear and Reserve Part List (F1 List), B114116-29-99-ID30-00001-AC
- [6] Mandatory Spare, Wear and Reserve Part List (F2 List), B114116-29-99-ID30-00002-AG
- [7] Technical Documentation Pulverize Plant MPS® Mill, B114109-35-99-GM03-00001-AC
- [8] Maintenance Strategy for the Coal Milling Plant rev2, 240-83107304
- [9] Guideline for Spares Procurement, Technical Evaluation and Quality Inspection 240-76960420.

### 2.2.2 Informative References

- [10] Management & Reporting of Strategic Spares: 36-972
- [11] Generation Strategic Spares Health Program GGS1495
- [12] Material Control, preservation and storage handling 31 0-6042
- [13] Power Station Outage Philosophy: 31 0-6200

## 2.3 Definitions

### 2.3.1 Capital spares

Capital spares are high value maintainable and refurbishable strategic spares with a useful life of more than one year that are identified against a specific projects or items of property, plant and equipment; and held as a contingency in the event of plant failure.

### 2.3.2 Critical spares

Critical spares are items of plant that will result in partial or full load loss or result a significant increase in the risk of having load losses or will have a negative impact on health, safety, the environment or statutory compliance, if the replacement item is not available. Spares for all Level 1 and 2 components are also classified as critical spares. For critical components a minimum of one spare must be kept.

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### 2.3.3 Swap out

Swap out is when an item is removed from plant and replaced by a capital spare for major refurbishment, minor repairs, servicing and/or routine maintenance

### 2.3.4 Strategic inventory

“Strategic inventory spares” are non-capital strategic spares with a cost of less than the high value as specified within each division/subsidiary.

### 2.3.5 Strategic spares

Strategic spares are spares which, if not readily available in inventory or from suppliers, would directly cause the loss of generating, transmission or distribution capability (i.e. items without which continuity of power supply will not be possible). Items are classified as strategic spares based on considerations such as the effect on operations if the item is not available, probability of need, source and lead time.

### 2.3.6 F1 spares

F1 Spares are the mandatory spares which will be supplied by the contractor to Eskom as part of the requirements of the construction contract.

### 2.3.7 F2 Spares

F2 Spares are the spares recommended by the contractor for Eskom to buy.

## 2.4 Abbreviations

Abbreviation	Explanation
BMCR	Boiler Maximum Capacity Rating
C&I	Control and Instrumentation
EC&I	Electrical, Control and Instrumentation
EMD	Electrical Maintenance Department
MMD	Mechanical Maintenance Department
MW	Megawatt
PS	Power Station
QCP	Quality control plan
SOW	Scope of Work
NRV	Non return valve
PRV	Pressure relief valve
PF	Pulverize Fuel

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## 2.5 Roles and Responsibilities

Department	Designation
Engineering	<ul style="list-style-type: none"><li>o Compile the Technical Evaluation</li><li>o To facilitate the Engineering interfacing and lead the Engineering change</li><li>o Compile the Scope of Work for the maintenance department</li></ul>
Maintenance	<ul style="list-style-type: none"><li>o End user for maintenance</li><li>o Oversees the inspection of spares on delivery and ensure that Materials Management keeps stock levels at required levels.</li></ul>
Procurement	<ul style="list-style-type: none"><li>o Develop commercial strategy</li><li>o Tender management</li><li>o Supplier selection</li><li>o Contract management</li></ul>
Materials Management	<ul style="list-style-type: none"><li>o Consolidate project strategy</li><li>o Manage schedule, cost and quality</li><li>o Resource plan</li><li>o All other disciplines</li></ul>
Quality	<ul style="list-style-type: none"><li>o Manage the quality control plans</li><li>o Manage Risks</li></ul>

### 2.5.1 Storage and Delivery Requirements

a) The Contractor shall be responsible for all spares during the execution of the work associated with the contract. If any spares are to be found defective/out of specification, they shall be replaced at the Contractor's expense.

### 2.5.2 Quality and Documentation Control

a) The Contractor shall ensure that any witness, hold and inspection points are strictly adhered to.

b) The Contractor to ensure that all measuring and test equipment is calibrated as per the relevant SANS standard at all times & proof thereof must be readily available.

c) All Quality References and Standards as stipulated in this document will be adhered to.

d) Work will only be conducted with an Employer approved Quality Management Programme.

e) The Contractor shall utilise the Employer's quality documentation management system and processes.

f) The Contractor shall prepare a QCP for the repair activities, which shall be approved by the System Engineer, Eskom Technician and Site Approved Inspection Authority for Quality Services. The hold points shall include:

- i. Verification of repair procedures, designs, welding procedures and operator qualifications
- ii. Material identifications

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- iii. Dimensional control
- iv. Visual examination of completed repair
- v. Verification of NDT results
- vi. Final inspection of component during operation
- vii. Approval of data package

## 2.6 Process for Monitoring

This document will be revised every two years or as and when required

## 2.7 Related/Supporting Documents

- [1] 32-92 Public Finance Management Reporting Procedure
- [2] Kusile Power Station Spares Strategy for Milling Plant – 240 109712660

## 3. Scope of Work

This document covers the Technical Specification manufacturing, supply and of all Kusile's MPS265 Milling plant spares to satisfy the mill maintenance programme and running maintenance. A list of the items is shown in the appendix

The items on the list are consisting of high moving stock and critical spares which include spares in the following areas:

Banker Hoppers and gates

Coal Feeders

MPS Mills

Hydraulic and Lubrication system

Pulverized Fuel Lines

### 3.1 Work to be Performed by *Supplier*

The following are the Supplier's requirement:

- a) The Supplier will ensure that the correct spare is supplied and will replace or be liable for damage at his/her cost if the incorrect or defective spare/s is supplied. The costs may include, but not limited to, production loss, repairs and/or plant downtime as a result of a defective or incorrect spare.
- b) The Employer's (i.e. Eskom Holdings SOC) acceptance of delivered spare/s does not absolve the Suppliers of the liability to supply the correct and/or defect free spare.
- c) The Supplier may, at the Employer's discretion, be given access to the plant to verify the information of the installed spare.

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- d) The spare must be exactly the same (i.e. same Part Number/BG & POS number) as specified on this works information and the part number will also be used to perform quality control checks. *Notwithstanding the stipulated condition that the Supplier is responsible for verifying the correctness of the spare's information provided by the Employer in relation to the existing installed spare. This may include the Supplier consulting the original supplier of the spare to ensure correctness of information provided by the Employer.*
- e) The Employer may at his/her discretion make the Employer's Engineer or employees or others available to the Supplier for the purpose of soliciting additional information or verifying information as the need arises.
- f) The Supplier will supply any additional information such as order part list, shop drawings, material certificates, OEM part numbers, detailed specification, etc. to assist the Employer in populating mandatory fields of DCF's used to catalogue the spares on SAP.
- g) The Supplier shall supply preservation and storage procedure/s, where applicable.
- h) The Spares Procurement Limit Over Five (Year) Period, indicated by the Employer in the attached table as one of the subheadings, is the maximum number the Employer may require the Supplier to supply over the contract period. However, the Supplier may only supply the quantity as specified by the Employer in the individual order instruction
- i) the Employer may subject the Supplier to a quality assurance assessment at the Supplier's or sub-Supplier's premises as part of the technical evaluation or before the contract placement or at any time during the contract period.
- j) Where the spare requires testing, the Supplier will inform the Employer to invite or make available the Employer's System Engineer to witness the tests.
- k) Should the Employer be dissatisfied with all or certain aspects relating to a specific spare test (including but not limited to suspected inferior quality or non-compliance) the Supplier will make good, rectify the faults or supply a new spare at his/her cost.
- l) Complete price breakdown must be supplied with the quotation and must include the cost of transport to Kusile Power Station. However, the Employer reserves the right to use the Employer's own transport.
- m) Spares will be opened for inspection, counting and quality control check at the Employer's stores.
- n) The Employer has provided the Bill of Material table in order to assist the Supplier to meet the requirements of the Work to be performed by the Supplier.
- o) The Employer may make clarification sessions available to either prospective Supplier/s in order to further assist the prospective Supplier/s to meet the requirements of the Work to be performed by the Supplier.
- p) The Supplier will supply the lead time of all required items in the tender for contract.
- q) The Supplier will indicate local (South African) representative/supplier, if any, that can also supply the spare items. Where possible all spares must be sourced locally.
- r) The Employer reserves the right to exclude the supply of some spare's items included in the contract with the Supplier, should the Employer become aware of alternative ways of sourcing those specific spares items locally.

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- s) The Supplier must ensure that all parts supplied must be individually packed in such a way as to protect the parts during transport and storage. The packaging must also include the necessary labels to identify the items.
- t) Manufacturing of various milling plant components should be as far as practical possible be done in South Africa

### 3.1.2 Packaging

- a) All supplied spares shall be packaged in such a manner that they will be transported and stored without damage. This includes preventing damage due to moisture ingress, dust and foreign objects.
- b) Different spare types shall be packaged separately such that each spare type can be stored separately. Packaging shall be such that the spare can be identified without opening the packaging. Packaging shall be of material that will not be damaged, to an extent possible, by harsh weather conditions during transportation. If that is not possible, then the packaging shall be protected against such conditions.
- c) Where possible, packaging to be such that procured spares can be positively identified through the packaging. Where this is not possible, the packaging to be such that it allows opening and closing of packaging and still maintain the packaging integrity thereafter.
- d) Delivery packaging to have the following details:
- e) Order number
- f) Physical address of Kusile Power Station and the Supplier
- g) Contact details of the Supplier
- h) Delivery note number

### 3.1.3 Acceptance of Spares

- a) No incorrect, damaged or faulty spares will be accepted.
- b) All the spares will be inspected before payment could be processed.
- c) Data capturing forms information must be supplied and must meet an acceptable level.
- d) Where applicable; test certificates, material certificate, manuals, data sheet and signature shall be provided as required.
- e) The Supplier must provide references of the companies that they have supplied similar spares to, and include the respective supply order/contract value, the contact's name, physical address and telephone number.

## 4. Acceptance

This document has been seen and accepted by:

Name	Designation
Mokwena Mkhabela	System Engineer
Given Rikhotsa	Manager Boiler Maintenance
Percy Masethe	Senior Advisor Mechanical Maintenance
Sakhile Mazibuko	Snr Supervisor Maintenance

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Abel Vuma	Maintenance Group Manager
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## **5. Revisions**

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
November 2025	1	Percy Masethe	New Document

## **6. Development Team**

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

- 1) Mokwena Mkhabela
- 2) Percy Masethe
- 3) Sakhile Mazibuko

## **7. Acknowledgements**

N/A

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**Appendix A- Spares Bill of Materials**

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