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PART A REQUEST FOR INFORMATION (RFI)

Description of the works/goods/services

The coal milling plant at Generation Kusile Power Station requires a reliable and robust supply chain of spares to support the milling plant maintenance program. Grinding elements are directly responsible for grinding of coal and has the most significant influence on mill performance, and cost.

To ensure Kusile Power Station is using the best grinding media available, proposals are sought from the market for testing of grinding elements. The aim would be to find the technology that would best support mill availability, efficiency, and lowest lifecycle cost.

SCOPE: The scope of this document is limited to proposals for MPS265 mill grinding elements. Proposals should be based on proven benefits over the current technology (High Chrome) in service, with reference to wear rates, availability, reliability, maintainability, and cost.

PURPOSE: The purpose of this document is to formally communicate the request for proposals into better grinding elements for MPS265 mills.


CONTRACTOR: The contractor will be responsible for proposing grinding elements based on the information supplied by Eskom. More information can be requested where necessary.

EMPLOYER: The employer will review proposals based on information supplied and operational experience. The employer will not be under obligation to test or accept any proposal. More information might be requested where necessary.

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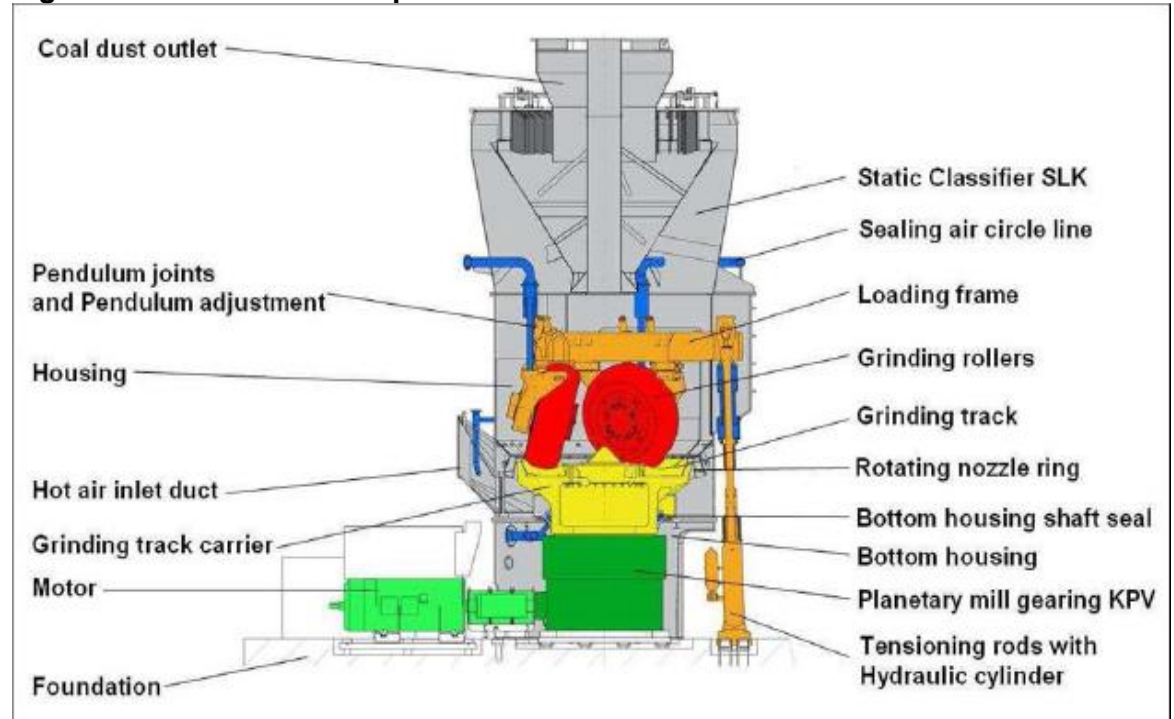
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WORKS INFORMATION MILL AND GRINDING ELEMENT INFORMATION

The MPS265 is a vertical spindle mill with three stationary grinding wheels rolling on a rotating grinding track driven by the mill motor via a gearbox. The grinding pressure can be varied by a hydraulic tensioning system as shown in figure 1 below.

Figure 1: MPS265 vertical spindle mill.



The grinding elements consist of three “tyres” (2070mm in diameter) as shown in figure 2 below, and a grinding track (3340mm in diameter) consisting of 13 segments as shown in figure 3 below.

The grinding element material in use is EN- GJN-HV600 (XCr23) as BS 4844 or SANS 1338:2008: Grade 3D with minimum 0,4 % Molybdenum, and minimum hardness of 650BHn.

Material composition specification is C:1.8-3.6%; Si:0.00-1.00%; Mn:0.50-1.50; Ni:0.00-2.00; Cr:0.00-1.20%; Mo:0.00-3.00%; S:0.00-0.08%; P:0.00-0.08%; with the remainder being Fe.

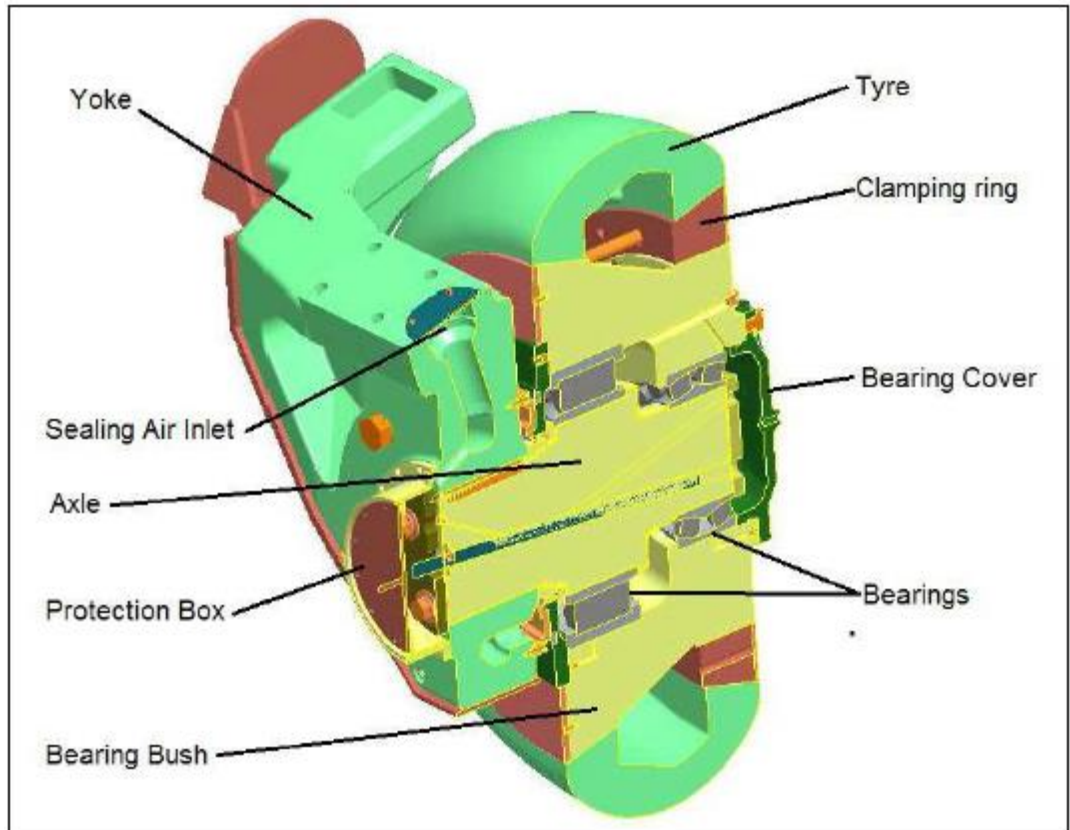
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Figure 2: Mill grinding roller assembly showing the tyre



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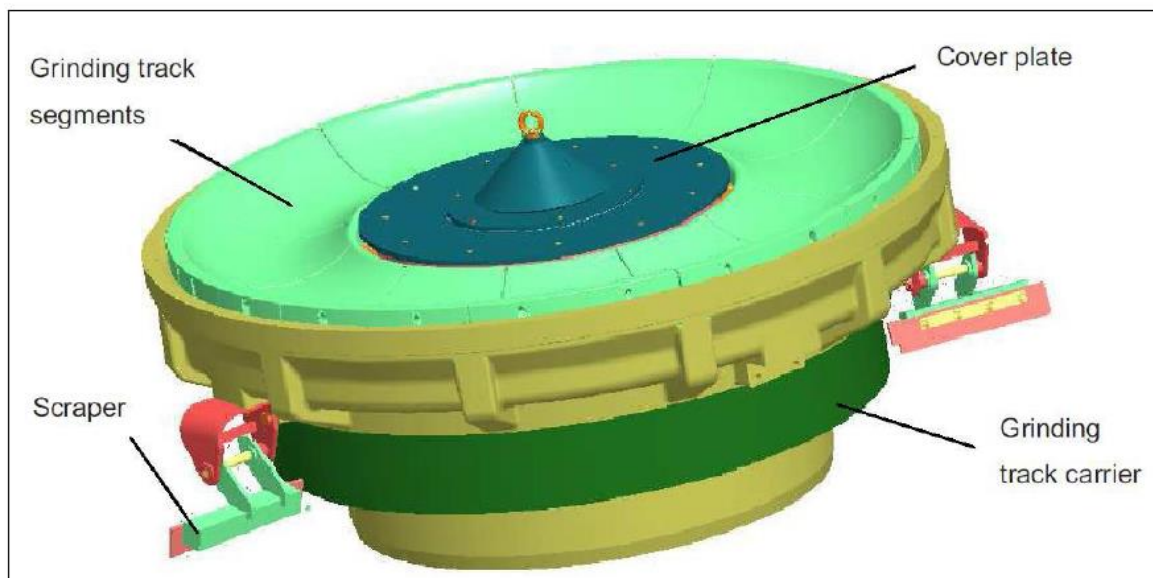
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Figure 3: Grinding track assembly showing the grinding track segments



OPERATING ENVIRONMENT

According to the original design the mills are supposed to receive coal with an Abrasive Index of 350mgFe/kg and anything above 450mgFe/kg will be rejected. The actual values received between 2017-2019 is shown in figure 4 below and indicates an average verified AI of about 300mFe/kg.

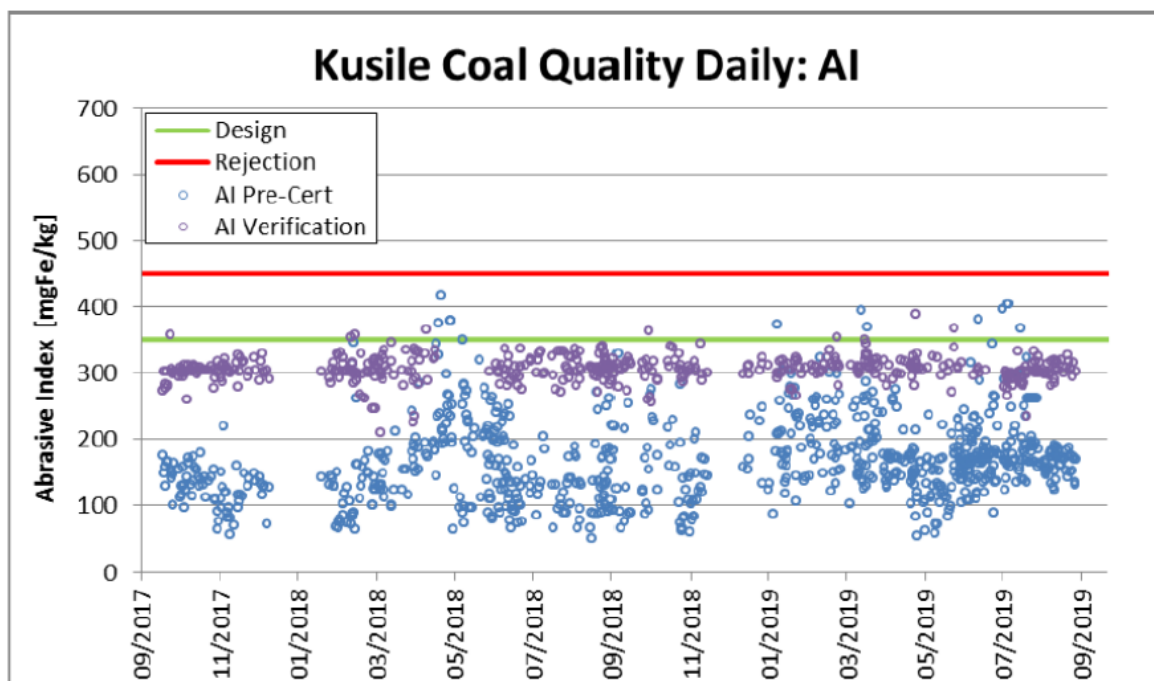
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Figure 4: Abrasive index for the coal received at Kusile Power station 2017-2019.



The original wear life of the grinding elements was to be 10'000hrs, but due to higher-than-expected wear rates it was adjusted down to 6000hrs in 2019 and further reduced to 3000hrs in 2020. From 2020 to 2022 the wear rate remained erratic, with grinding elements reaching anything between 3000hrs to 5000hrs.

REQUIREMENTS (WISH LIST)

An alternative is sought to replace the current high chrome grinding elements that would increase the grinding element lifetime to 20000 running hours under the operating conditions experienced at Kusile power station. This means an approximate improvement of 4.5 times compared to the lifetime of the original material is required.


TEST METHOD

All proposals will be evaluated by according to [2] Kusile Power Station Proposal evaluation strategy for MPS265 grinding elements, to ensure it does have technical merit. Accepted proposals will be installed as a test on one unit along with one new set of original high chrome grinding elements which would serve as a control. The mills will be inspected for grinding element condition during scheduled inspections every 2000 running hours. The test duration will at minimum be until reliable wear data is obtained or until 20000 running hours is reached.

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TEST CRITERIA

The grinding elements will be evaluated based on wear life compared to the original grinding elements. In case materials with different wear rates are used within the same component the thickness and placement of such materials should ensure the grinding sets wear evenly across the wear surfaces so that an even grinding bed gap and grinding efficiency can be maintained for the full life of the grinding elements.

The grinding elements should not break apart or fail in any way during normal operation, including steam and air purging or while rejecting stone and tramp iron which enters the mill as part of the coal feed. (Excluding fires)

TECHNICAL EVALUATION CRITERIA

EVALUATION THRESHOLD

The minimum weighted final score (i.e., threshold) required for a proposal to be considered for testing is 70%. Suppliers who do not meet the minimum threshold of 70% will be disqualified.

WEIGHTED SCORECARD

A weighted score card approach will be used to evaluate proposals. The individual scores from the TET members on each evaluation criteria will be added and averaged to obtain a final score.

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Table 1: Assessment scorecard

SCORE	PERCENTAGE	DESCRIPTION
5	100	ACCEPTABLE FOR TESTING -No foreseen technical risk(s) in meeting technical requirements.
4	80	ACCEPTABLE WITH ASSOCIATED QUALIFICATIONS Meet technical requirement(s) with. Acceptable technical risk(s) AND/OR. Acceptable exceptions AND/OR. Acceptable conditions.
2	40	NOT ACCEPTABLE FOR TESTING 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

QUALITATIVE TECHNICAL EVALUATION CRITERIA


Suppliers are required to submit proof of the documents requested under technical evaluation criteria and to meet the 70% threshold in order for them to go to the next stage of the evaluations.

NB: The technical evaluation criteria is attached.

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PRICING

Suppliers are required to submit the indicative pricing.

Shortlisted tenderers will also be required to do the testing at Kusile Power Station and the indicative pricing for testing should be included in the pricing schedule.

NB: The outcome of the RFI may be used for contracting purposes without following an open enquiry process.

Clarifications must be sent via e-mail to the following Eskom email address:
MokwenRJ@eskom.co.za

BASIC COMPLIANCE

In order to avoid the risks of RFI tampering and/or the disclosure of confidential information during tender evaluations, tenderers are required to supply Eskom with two exact copies of the tender in the following format and quantities, by the deadline for tender submission:

HARD COPIES – 1 ORIGINAL AND 1 EXACT COPY OF THE TENDER

Failure to provide the necessary copies by the deadline for RFI submission will immediately render their RFI nonresponsive and will be disqualified from further evaluation. Tenderers will not be permitted to provide the required copies after the deadline for tender submission have passed, and Eskom will not be responsible for the making of copies for the purposes of evaluation.


RFI will be opened at the same date and time as the tender deadline.

RFI NUMBER: MPKUS10593GX
RFI will be opened on: 28 March 2023
RFI Closing date: 28 March 2023
RFI Closing time: 10h00

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	<p>The tender should be submitted at the following address:</p> <p>Place: Eskom Holdings SOC Limited The Tender Advice Centre – Tender box at Main Reception Area 10 Smuts Avenue, Witbank, 1035 Time:10.00 am</p> <p>Address your RFI to: Romeo Mokwena RFI number: MPKUS10593GX Eskom Holdings SOC Limited The Tender Advice Centre – Tender box at Main Reception Area 10 Smuts Avenue, Witbank, 1035</p>		
Deadline for submission	28 March 2023	At (South African Standard Time)	10h00
Tender Office address	Eskom Holdings SOC Limited The Tender Advice Centre – Tender box at Main Reception Area 10 Smuts Avenue, Witbank, 1035		


Eskom Holdings SOC Ltd (“Eskom”) invites you to submit a:

- Request for information (RFI) on chemical analysis for the wet flue gas desulfurization process streams as stated in the table. This RFI is a stand-alone information-gathering and market-testing exercise, intended only to inform and assist Eskom’s further deliberation and development of a strategy for the Mill Grinding Elements. Eskom request indicative prices.

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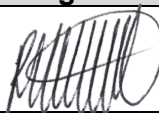
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Eskom has delegated the responsibility for this **RFI** to the signatory of this document, whose details can be found below.

We look forward to receipt of your response.

Yours faithfully


Name	Designation	Signature	Date
Romeo Mokwena	Officer Procurement		24 February 2022
Telephone number	013 699 7369	Fax and/or e-mail address	MokwenRJ@eskom.co.za

PART B RESPONSE SHEET IN TERMS OF A REQUEST FOR AN EXPRESSION OF INTEREST /REQUEST FOR INFORMATION To be completed by the supplier			
To	Eskom Holdings SOC Ltd	Date	
Attention	Romeo Mokwena		
Tel no		Fax no and /or e-mail address	
From		Address	

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Address	
Sender	
Description of the works/goods/services	

Please find below our response to Eskom's questions:

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No.	Question	Please indicate your response in this column
1.	<i>Your contact's name and contact details</i>	
2.	<i>Company registration number</i>	

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3.	<i>Brief description of previous experience and Description of the solution that you can offer</i>	
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4.	<i>Indicative prices</i>	
5.	<i>[Add applicable questions]</i>	

Yours faithfully

Name	Designation	Signature	Date
Telephone number		Fax and/or e-mail address	

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