Eskom	Scope	Engineering

Title: **Kriel PS Boilers Apertures and Bottom Ash Hoppers Refractory Supply and Services - Scope**

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TABLES

1. INTRODUCTION

The purpose of this scope is to briefly outline refractory requirements within the boiler plant in relation to its application, specification and locations on which the refractory will be needed. It is also essential to note that, this scope is only applicable to Kriel Power Station Boilers.

2. SUPPORTING CLAUSES

2.1 SCOPE

The purpose of this document is to define the scope of work for **refractory requirements** Kriel Power Station boiler.

2.1.1 Works Information

The contractor is expected to always supply the items listed in table 1 below in correct specifications and quantities.

The primary instruction to the service provider includes but not limited to:

Repair, replace and re-instate the refractory on the tabulated boiler areas below with the required minimum specifications ranging from High duty refractory at **1400 °C** to Super duty refractory at **1600 °C**.

Below are all the refractory specifications and areas on which they are suitable for application and how each

type of refractory is utilized:

1. SiC Tile – Front ring and back rile tiles.

2. SiC Castable
   - Used at the burner faces, burner corner pockets.

3. SiC Mouldable
   - Building cement for the tiles.

4. Morta
   - Firebricks cement at the Ash-hoppers

It is clear from the specification above that, refractory **number 2** will be the most useful and applicable for Kriel Power Station's Boilers Furnace apertures. Refractory **number 4** should be used in the colder areas such as the hoppers and the inspection ports at 2 m level of all the boilers at Kriel power station.

Table 1: Steel item list

Refractory					
Line		**FIN**	**Component**	**Sub-Component**	**Description**
R	1.1	000	Boiler External	Ash Hoppers	Replace/repair refractory in all 6 x off Ash hoppers' internal walls. Outage to ensure that action is given to respective contractor. (General CI)
R	1.2	000	Boiler External	Casing Access & Inspection Doors	Replace/repair refractory on the casing access and inspection doors. Outage to ensure that action is given to respective contractor. (General CI)
R	3	036	Evaporator	Pyrometer Ports	Re-instate all broken off and damaged refractory on all pyrometer ports.
R	3	036	Evaporator	Screw Wall Inspection Ports	Re-instate refractory on all inspection ports. Make sure the tubes are covered
R	3	036	Evaporator	Screw Wall Access Doors	Re-instate refractory on all access doors. Make sure the tubes are covered
R	3	036	Evaporator	Burner Mouths	Re-instate all broken off and damaged refractory on all Burner Mouths.
R	4	042	Evaporator	Vertical Wall - Sootblower ports	Re-instate all broken off and damaged refractory on all Sootblower ports (Port 101-148)
R	4	042	Evaporator	Vertical Wall - Access Doors	Re-instate refractory on all access doors. Make sure the tubes are covered

2.1.2 Purpose

The purpose of this document is to define the scope of work/ for services to repair, install/reinstate and supply of the refractory material to Kriel Power station – on an “As and When Required” basis.

2.1.3 Applicability

This document is applicable to Kriel 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] 240-168966153 Generation Tender Technical Evaluation Procedure
[2] QM 58: Supplier Contract Quality Requirements
[3] ISO 9001: Quality Management Systems.

[4] ISO 14001: Environmental Standard

2.2.2 Informative

[5] 240-105658000: Supplier Quality Management Specification

[6] BS EN 10204:2004 Metallic Products: Types of Inspection Documents

[7] QM 58 Supplier Contract Quality Requirements Specification

[8] 240-28463367: SHE Organization

[9] 240-30008949: Safety, Health, and Environmental Specifications for Contractors

[10] 240-49230111: Hazard and Operability Analysis (HAZOP) Guideline (Rev 1)

[11] 32-421: Cardinal Rules

2.3 DEFINITIONS

N/A

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
MM	Millimetres
MTLC	Metallic
MTL	Metal
STRCTRL	Structural

2.5 ROLES AND RESPONSIBILITIES

As per 240-168966153: Generation Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

3. AUTHORISATION

This document has been seen and accepted by:

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4. REVISIONS

Date	Rev.	Compiler	Remarks
February 2024	1	Feyane Tivane Wonder Nkentshane	New Document created

5. DEVELOPMENT TEAM

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

- Feyane Tivane
- Wonder Nkentshane

6. ACKNOWLEDGEMENTS

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