 Eskom	Scope of Work	Generation
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Title: **Supply, replacement and repair of fire doors at Duvha Power Station, as and when required for the durations of 60 months project scope of work**

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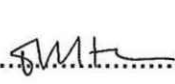
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## 1 INTRODUCTION

Duvha Power Station is a coal fired power station located in Witbank, Mpumalanga Province. The Power Station has six power generating units with a combined capacity of 3,600MW. Passive fire protection system components including doors and coatings are all installed over the station where there are concern of the fire outbreak. Currently there is non-compliance in terms of passive protection systems in some areas and maintenance takes too long to be undertaken. Fire doors and other fire retarding critical components or coatings are designed to withstand fire for more than 2 hours so that fire protection systems and fire officials can extinguish the fire before it spreads far and causes severe damages to property and loss of life.

At Duvha Power Station, fire doors are fitted in different areas starting from Unit 1- 6 OML to 33ML, switchgear rooms, plant and equipment rooms, cable tunnel entrances/exits, hallways, fire escape passages, workshops, control rooms, some offices in the station and outside plant properties. There are two types of fire doors; which is wooden and galvanized steel fire doors, and from time to time they need to be maintained, repaired and replaced as per maintenance philosophy. There are other fire rated components such as door frames, drywalling, brickwork, shutters, vermiculate coatings and seals that need to be maintained and replaced when they are defective and in some areas new installations are required.

The maintenance contract of fire passive system components (frames, doors, seals, shutters, brickwork) will address the inefficiencies of the existing systems, and tackle all defects as they arise, and it will improve the systems and make it to be compliant to SANS 1253 (latest revision). Maintenance contract will ensure that execution time will be within maintenance prioritization procedure as many defects of fire doors are safety related.

## 2 SCOPE

The purpose of this document is to outline the scope of work to be carried out by an external service provider on behalf of maintenance for fire doors contract. The scope of work entails the contractor to do visual inspection, supply of new material, repairs and replacement of fire doors, fire shutters, fire seals and accessories according to SANS 1253 (latest revision) at Duvha Power Station for the period of 60 months on as and when required.

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## 2.1 APPLICABILITY

This document applies to Duvha Power Station only.

## 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] SAS0012 - Safety, Health & Environmental Specifications for Contractors
- [3] 32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy
- [4] Occupational Health and Safety Act No. 85 of 1993,
- [5] QM58 (Rev2) - Suppliers contract quality requirements specification
- [6] MGM0001 - Maintenance Quality Manual
- [7] SANS 1253 (latest revision)
- [8] SANS 1200 - Standardized specification for civil engineering construction
- [9] SANS 10400 - The application of the National Building Regulations.
- [10] 240-150642762 Generation Plant Safety Regulations

### 2.2.2 Informative

- [1] 474-58 (Rev1): Document and Records Management.

## 2.3 DEFINITIONS

None

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## 2.4 DISCLOSURE CLASSIFICATION

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

## 2.5 ABBREVIATIONS

Abbreviations	Descriptions
OHS Act	Occupational Health and Safety Act No 85 of 1993
PPE	Personal Protective Equipment
PS	Power Station
PSR	Plant Safety Regulations
QC	Quality Control
QCP	Quality Control Plan
QM	Quality Management
SANS	South African National Standards
SE	System Engineer
SHEQ	Safety, Health, Environment and Quality

## 2.6 ROLES AND RESPONSIBILITIES

### 2.6.1. Appointed Contractor

- All contractors shall work within the parameter of the job description and scope of work. To keep all instructions/ procedures on hand and supply Eskom power station with reference to be included in this document and supply record and history requirements.
- Contractors must also ensure that the work is performed to the highest standard and in line with Eskom SHEQ policy and applicable OHS regulations.
- Execute the scope of work safely as per Occupational Health and Safety Act 85 of 1993.
- Execute the scope of work as per the employer's specification and SANS 1253 (latest revision). To ensure quality assurance is done as per QM 58.

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#### 2.6.2. Project Manager

To ensure that the supplier execute all the work specified in the scope of work on the set timelines and also ensure that:

- All work is executed in accordance with the legal requirements (Occupational Health and Safety Act 85 of 1993).
- All employees are provided with the prescribed personnel protective equipment (PPE) as required.
- All workers are familiar with the project hazard and risk assessment and relevant control measures.
- The work is carried out by appropriately authorised or competent persons.
- Ensure that all documents are accurately completed and signed before returning the documents like service instruction and information documentation to Work Management Department for capturing and filing.
- All work is executed in accordance with the legal requirements (Occupational Health and Safety Act 85 of 1993), relevant engineering (e.g SANS) & quality standards.

#### 2.6.3. System Engineer (SE)

- As custodian of the Maintenance Basis, they must ensure all actions required in terms of the reliability base and any other reliability matters are implemented on their systems.
- Must inspect the system after the maintainer has maintained, following the approved quality control plan.
- The SE will review the scope of work developed by maintenance and the work, which will be executed and ensure that quality assurance is adhered to.

#### 2.6.4. Maintenance Technician

- Inspection of all hold/witness points indicated on the QCP
- Must ensure work is done to the highest standard and regarding to the safety regulations.
- Must supervise the works during execution.

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### 3 SCOPE OF WORK

#### 3.1 DESCRIPTION OF THE WORKS

Fire doors and other fire passive system components have various sizes depending on the nature of the openings and what are they designed for. While the power station is operational, these fire doors needs to be maintained or replaced and, in some instances, new fire doors installation are required. Fire passive system components includes components such as fire shutters, fire seals, fire resistant brickwork, Europair Prefco Model 5020, Fusible Links Model FLS39 and vermiculate surface treatment, and these components they need to be addressed when they are defective.

The scope is work entails to do the visual inspection, supplying new material and installation, repairs and replacement of fire doors, fire shutters, fire seals and other accessories for the period of 60 months on as and when required basis.

The *Employer's* requirements during the execution of the scope of work is to ensure statutory and mandatory compliance to all applicable safety standards at Duvha Power Station.

#### 3.2 SCOPE OVERVIEW

The scope of work consist the following;

- The *Contractor* provides a site crew of qualified and experienced personnel to carry out the service for the entire Duvha Power Station jurisdictions and its property's.
- The *Contractor* performs visual inspection to establish the condition and state of the fire doors and other fire passive system components. The inspection does not constitute an automatic overhaul of fire doors, brickwork, coating, seals and shutter repairs without the *Service Manager* instructions.
- The *Contractor* procures, supplies and installs new material of fire doors, fire shutters, fire seals and it accessories. The Contractor shall ensures that material is tested in accordance with SANS 10177 and test results shall be supplied to the Client for acceptance.
- The *Contractor* provides tools, gear, equipment and consumables to carry out the works.
- The *Contractor* ensures the safety of own personnel, other contractors and *Employer's* employees in the vicinity of the works by complying with the OHS Act and Construction Regulations.
- The *Contractor* plans and executes the work and provides a detailed plan for each task order.

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- The *Contractor* performs quality control on own work as per pre-approved quality control plans.
- The *Contractor* performs work within the specified period and to the acceptable quality standard.
- The *Contractor* must adhere to the Eskom Generation Plant Safety Regulations for activities on the plant especially where work needs to be done in restricted areas.
- The *works* also includes the decommissioning and re-commissioning, removal, dismantling as well as making good of areas affected by the removal thereof. All redundant equipment to be removed by the *Contractor* and disposed of in the correct disposal bins.
- The *Contractor* shall maintain a record of services carried out and make it available to *Service Manager* as and when it is required.
- The *Contractor* supplies necessary tools and equipment to carry out the activities.
- The *Contractor* carries out all work according to the required standards, applicable governing laws, regulations and Eskom Safety Standards.
- Maintenance and replacement of Class B wooden and galvanised steel doors of different sizes.
- Maintenance and replacement of ironmongery for Class B fire doors of different sizes.
- Repairing, replacement and new installation of various sizes fire shutters.
- Repairing, replacement and new installation of various sizes fire seals.
- Maintenance and new installation of fire and smoke barriers on the walls.
- Repairs, installation and application of structural steel coating, concrete wall coating and any other surface coating using vermiculate.
- Repairs of gypsum dry partition wall to meet the required fire rating specified and installation of new fire rated gypsum in new areas.
- Maintenance, new installation and repairing of brickwork to meet the required fire rating specification in different brick wall thicknesses such as 115mm and 230mm walls, and in precast roof slabs in building structures. Repairs of brick walls around the door frames with the cement or any other SANS approved product mortar mixing ratio of 1:3. Face bricks shall come in a standard sizes of 215 mm x 102.5 mm x 65 mm (length x depth x height) and they need to fit well on the existing plant brick wall
- Replacement and new installation of galvanised steel deep door frame anchors on the door frames to meet the required fire rating specification.
- Painting activities associated with the doors, frames, shutters and seals
- Maintenance and replacement of fire door pull and push handles, auto-door closers, fire door handles, lockset mechanisms and cylinders.

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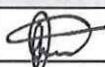
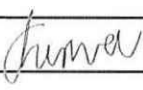

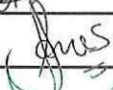
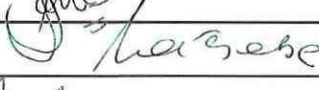


- All the passive fire protection components shall conform to the requirement stated in Eskom's Fire Protection & Life Safety Design Standard (240-54937450)

### 3.3 RELATED/SUPPORTING DOCUMENTS

None.

## 4 STAKEHOLDER ENGAGEMENT

This document has been seen and accepted by:

Name & Surname	Designation	Signature
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V Chirwa	System Engineer (Civil)	
B Flekisi	Quality Officer	
M Jones	Fire and Risk Manager	
S Matsebe	Safety Risk Management Manager	
S Nhlapo	Environmental Management Manager	
T Khumalo	System Engineer (Ash)	

## 5 AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation
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T Khumalo	System Engineer (Ash)

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Supply, replacement, and repair of fire doors at Duvha Power Station, as and when required for the durations of 60 months project scope of work

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## 6 REVISIONS

Date	Rev.	Compiler	Remarks
April 2023	0	T Zondo	Draft document
April 2023	0.1	T Zondo	Incorporate review comments document
May 2023	1	T Zondo	Final Document

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