

# **Scope of Work**

Bulk Materials Services

Title: Inspection and Load Testing

of Lifting Equipment for a Period of 5 Years on an as and when required basis.

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**Industries SOC Ltd** 

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**DISCLOSURE** 

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#### 1. INTRODUCTION

Eskom Rotek Industries SOC LTD (ERI) Business Units provides strategic and essential activities such as repairs, maintenance, refurbishment and related engineering services to all Eskom Power Stations and substations located in South Africa. ERI workshops and their sites have the ability to conduct lifting activities and to operate lifting machinery. The operational lifting equipment (Lifting Machines, Lifting Tackles, Manually Operated Lifting Devices) in these areas is subjected to a three-monthly inspections and annual load testing. Any supplier appointed to rendering these services should comply with Eskom requirements as stipulated in the procurement and SHEQ polities.

This scope makes provision for the development of a three-monthly statutory inspections and annual load testing of all ERI lifting equipment in order to ensure safety and compliance at all times.

## 2. SUPPORTING CLAUSES

### 2.1 SCOPE

This document covers the Inspection and Load Testing of Lifting Equipment for a Period of 5 Years on an as and when required bases for all ERI lifting equipment. The scope also covers the minimum requirements to be met by the Service Provider which will ensure that the aforementioned service is inspected and load tested according to the highest standard and effectiveness required by the client (ERI).

# 2.1.1 Purpose

The aim of this document is to define the scope of work Inspection and Load Testing of Lifting Equipment for a Period of 5 Years on an as and when required basis.

# 2.1.2 Applicability

This document shall apply throughout Eskom Rotek Industries SOC (LTD).

### 2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

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### 2.2.1 Normative

Parties using this document shall apply the most recent edition of the standards for best practices and in line with Eskom specifications that are indicated in this document.

[1] SANS 12100 - Safety of Machinery

### 2.2.2 Informative

Parties using this document shall apply and have knowledge of the most recent edition of the standards as listed below.

- [2] ISO 9001 Quality Management Systems.
- [3] ISO 14001 Effective Environmental Management System
- [4] OHSAS 18001 Occupational Health and Safety Standards
- [5] OHS Act 85 of 1993, specifically: General Machinery Regulation (GMR), Electrical Installation Regulations (EIR), Electrical Machinery Regulations (EMR) and Driven Machinery Regulations (DMR)

### 2.3 DEFINITIONS

Definition	Description
ERI	Eskom Rotek Industries SOC LTD, the Client

## 2.3.1 Disclosure Classification

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

# 2.4 ABBREVIATIONS

The following are abbreviations and their descriptions are specific to this document.

Abbreviation	Description	
RPM	Revolutions Per Minute (speed)	
PM	Preventative Maintenance	
CM	Corrective Maintenance	
PdM	Predictive Maintenance	
CMMS	Computerized Maintenance Management System	

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### 2.5 ROLES AND RESPONSIBILITIES

Roles	Responsibilities
Scope Compiler	Compilation of the scope of work
Functional Responsibility	Reviewing and acceptance of the scope
Support Personnel	Support and acceptance of the scope
Approval Authority	Approving the scope for tendering purposes
Authorising Personnel	Reviewing and authorising the scope
Service Provider	Execution of the approved scope

# 2.6 PROCESS FOR MONITORING

Requirements	Monitoring Process	
Computerised Management Process	Monitoring of the execution progress	
(SAP)		

# 2.7 RELATED/SUPPORTING DOCUMENTS

- Lifting Equipment Maintenance Philosophy

# 3. SCOPE OF WORK

# 3.1 BACKGROUND

ERI has numerous lifting equipment used across the Group. This lifting equipment require statutory inspections and Load Testing in line with the OHSAct. The Inspection and Load testing services executed on this lifting equipment are both planned and unplanned work as the requirement may be. The planned work is as per the statutory inspection intervals of 3-months/quarterly and annual load test. The unplanned work covers any other inspection and/or load testing that may fall outside of the planned work.

As part of a full services proposal, the scope of work should be divided into a well-structured on-going inspection and load testing services. The scope must be tailored for each area so as to specifically address the needs of each piece of equipment. This must include planned inspections of the equipment as well as the load testing of the equipment at the required intervals. This scope, while entailing the inspections and load testing

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of the equipment as they stand, also seeks to build a history of utilization and condition of each equipment worked on. Therefore, the service provider shall work with the client to develop a comprehensive list and condition of each equipment and its history of either inspections and/or load testing.

# 3.2 SITE INFORMATION

The scope entails work to be executed at different sites within the ERI Group.

### 3.3 PLANT DESCRIPTION

The plant description where the work will take place is as follows:

- Statutory quarterly inspection for all statutory equipment
- Annual Load testing for all statutory equipment requiring load testing.

Below is the table of the equipment that exists within the group that may require repairs but is not limited to only this list.

Site	Equipment tyre	Quantity	
Rosherville Yellow Plant & Grootvlei	Lever Hoist	10	Load Test & Repair
	Chain Block	10	Load Test & Repair
	Lifting Beams/Gantry	1	Load Test & Repair
	Fork Lift	1	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	2 (Workshop and Man Works)	Load Test & Repair
	Chain Sling	3	
	Snatch Block	0	Load Test & Repair
	Hydraulic Jack	2	Visual Inspection
	Jack Stands	8	Load Test
	Beam Crawler	2	Load Test & Repair
	Mobi Jack	1	Load Test & Repair
Lethabo Power Station	Lever Hoist	0	Load Test & Repair
	Chain Block	0	Load Test & Repair
	Lifting Beams	1	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	0	
	Chain Sling	1	Visual Inspection
	Snatch Block	3	Load Test & Repair

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	Tirfor	0	Load Test & Repair
Komati Water scheme	Lever Hoist	0	Load Test & Repair
	Chain Block	4	Load Test & Repair
	Lifting Beams	0	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	5	Load Test & Repair
	Chain Sling	14	Repairs
	Snatch Block	0	Load Test & Repair
	Tirfor	2	Load Test & Repair
	Mobi Jack	1	Load Test & Repair
Kusile Power Station	Lever Hoist	35	Load Test & Repair
	Chain Block	56	Load Test & Repair
	Lifting Beams	0	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	5	Load Test & Repair
	Chain Sling	31	Visual Inspection
	Snatch Block	7	Load Test & Repair
	Wire Rope Sling	4	Visual Inspection
	Tirfor	4	Load Test & Repair
	Hydraulic Jack	Not	Load Test & Repair
	/Mechanical	Confirmed	
	Beam Crawler /Clamps	5	Load Test & Repair
Duvha Power Station	Lever Hoist	15	Load Test & Repair
<u> </u>	Chain Block	11	Load Test & Repair
	Lifting Beams	14	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	0	Load Test & Repair
	Chain Sling	10	Visual Inspection
	Snatch Block	2	Load Test & Repair
	Wire Rope Sling	3	Visual Inspection
	Tirfor	4	Load Test & Repair
	Hydraulic Jack	Not Confirmed	
Majuba Power Station	Lever Hoist	19	Load Test & Repair
	Chain Block	9	Load Test & Repair
	Lifting Beams	0	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	0	Load Test & Repair
	Chain Sling	2	Repairs
	Snatch Block	2	Load Test & Repair

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	Wire Rope Sling Tirfor	0	Visual Inspection
	Hydraulic Jack	Not Confirmed	Load Test & Repair
Camden Power Station	Lever Hoist	4	Load Test & Repair
	Chain Block	2	Load Test & Repair
	Lifting Beams	0	Load Test & Repair
	Fork Lift	0	Load Test & Repair
	Overhead Crane /Auxiliary Hoist	0	Load Test & Repair
	Chain Sling	5	Visual Inspection
	Snatch Block	3	Load Test & Repair
	Wire Rope Sling	0	Visual Inspection
	Hydraulic Jack	0	Load Test & Repair
Matimba Power Station	Lever Hoist	0	Load Test & Repair
	Chain Block	0	Load Test & Repair
	Chain Sling	0	Visual Inspection
	Jack Stand	4	Visual Inspection
	Wire Sling	2	Visual Inspection
Medupi Power Station	Lever Hoist	Not Confirmed	Load Test & Repair
	Chain Block	Not Confirmed	Load Test & Repair
	Chain Sling	Not Confirmed	Visual Inspection
	Overhead Crane /Auxiliary Hoist	Not Confirmed	

## 3.4 DETAILS OF THE WORKS

The specific tasks to be conducted are detailed below. The detailed tasks are the bare minimum and binding as the minimum contractual agreement between the Client and the Service Provider. OEM requirements that may, or may not, be different from the detailed scope will be considered as and when it may arise. Upon any realization of such, the Service Provider and the Client's Representative will agree on the most effective, feasible and cost effect manner to proceed.

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Prior to commencement of any work, the Service provider must make available all previous reports of any work they may have executed on the same equipment. The work entails but is not limited to:

- (i) Inspection, load testing of overhead cranes, Job crane and hand operated lifting equipment Annually
- (ii) Inspection of lifting tackles three-monthly

The work shall be conducted by a qualified and accredited individual which means (i) shall be executed by a Lifting Machinery Inspector (LMI) while (ii) shall be executed by a Lifting Tackle Inspector (LTI) as a bare minimum.

### 3.5 DELIVERABLES

The service provider shall ensure that the reports and documentation pertaining the work carried out are submitted to the Client's Representative. Below is a table that entails the minimum details to be contained in the report.

The agreed template will be provided to the Service Provider upon finalization of the contract and prior to the initial rendering of the services.

**Table 1: Report Minimum Required Information** 

System	Report Content		
Housekeeping	The initial housekeeping prior to the execution of the task		
	and the resulting housekeeping condition after the		
	execution of the task		
Equipment condition	The condition of the equipment prior to starting the work and		
	the condition of the equipment after the work has been		
	completed		
Planned Maintenance Work	PM Orders printed by the client shall be completed and		
Orders	signed off by the LMI/LTI and the relevant area Supervisor.		
	All defects identified during the inspection shall be recorded		
	on the PM Orders and also a separate report shall be		
	handed over to the client.		
Cooperation Between	Ease of access to the equipment and cooperation by the		
Service Provider and the	Client's personnel for the execution of the task.		
Client			

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Not Available for Inspections	A separate report identifying all the NAFI shall be drafted		
(NAFI)	by the LMI/LTI and signed off by both the LMI/LTI and the		
	relevant area Supervisor.		
OHSAct DMR	All work shall comply to the most current OHSAct DMR		
	(18) and SANS 500 and any other relevant standard.		
Equipment Specification	The details of the equipment worked on shall include the		
	name, serial number, asset number, design specs and data		
	of the equipment.		
Recommendations	Any recommendations outside of the contractual		
	agreement of the execution contract of this scope of work.		
Service Report	Detailed service report of all work done and list of all		
	replacement parts used, if any.		

### 3.6 ASSESSMENT CRITERIA

Upon completion of the maintenance task, the Service Provider shall ensure that a Client's Representative, to be identified as and when required, inspects and signs off the work executed prior to the acceptance of the work as complete in accordance with the contract by the Client's Representative. The Servicer Provider shall ensure that records are kept for the duration of the contract while the Client's Representative shall ensure that records are kept safe for the duration as stipulated in the philosophy.

### 3.7 WARRANTY

The work performed is warranted to be free from defects in material and workmanship from date of completion of the work to the next scheduled period. The warranty shall cover:

- 3.7.1 New electrical and Mechanical parts as stipulated by OEM.
- 3.7.2 Workmanship for 6 Months after acceptance of work by the Client
- 3.7.3 The product must be used in accordance with manufacturer's recommendations and must not have been subject to abuse, lack of maintenance, misuse, negligence, or unauthorized repairs or alterations. Should any defect in material or workmanship occur during the above time period in any product, as determined by the supplier inspection of the product, the Service Provider, agrees, at its discretion either to replace (not including installation) or repair the part or product free of charge.

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### 3.8 ELIGIBILITY EVALUATION CRITERIA

The Service Provider intending to tender for this work shall ensure they are and/or employ qualified and competent personnel in the field of Lifting Equipment. Notwithstanding other requirements that may arise during the tender process, the following are the minimum requirements.

- 3.8.1 Qualified and Accredited LMI and LTI
- 3.8.2 Proof of LME registration

### 3.9 GENERAL CONSTRAINTS

The following are the general constraints that are to be considered:

- 3.9.1 Working in an operational environment where equipment is being handled.
- 3.9.2 Negotiating with Production Managers to arrange planned shutdowns specifics within the contractual interval requirements.
- 3.9.3 Minimizing down periods as production will still be taking place in and around the vicinity of the working area.
- 3.9.4 Working in areas where there are vehicle and pedestrian traffic.
- 3.9.5 Accuracy of existing information may be outdated and need to be verified on site prior to proceeding with any work.

## 3.10 TERMS AND CONDITIONS

The successful Service Provider will be expected to adhere to the following minimum conditions:

- a) Adherence and compliance to the health and safety standards set out by the Client.
- b) Provide adequate PPE to its employees.
- c) Provide its own working and fully functional tools.
- d) Fully sign and complete the PM Orders.
- e) Issue the service report for the work done and fully signed by the responsible Technician or Supervisor.

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- f) Respond to the call out within 6 hours after receiving a call out.
- g) Hand over the replacement (parts removed from the equipment parts to the Client.

## 4. AUTHORISATION

Name & Surname	Designation
Shuaib Gaibie	BMS Engineer

# 5. REVISIONS

Date	Rev.	Compiler	Remarks
August 2024	1	S Gaibie	Scope of Work – Inspection and Load Testing of Lifting Equipment for a Period of 5 Years on an as and when required basis.

### 6. DEVELOPMENT TEAM

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

Shuaib Gaibie

# 7. ACKNOWLEDGEMENTS

- Plant Maintenance Team
- Maintenance Team
- TGS team