	Work Instruction	Matla Power station
---	-------------------------	----------------------------

Title: **LIFTING, TRANSPORTING AND
OFF-LOADING A LOAD WITH A
LIFTING MACHINE**

Document Identifier: **4417**

Alternative Reference Number: **N/A**

Area of Applicability: **Matla Power station**

Functional Area: **Maintenance**

Revision: **4**

Total Pages: **9**

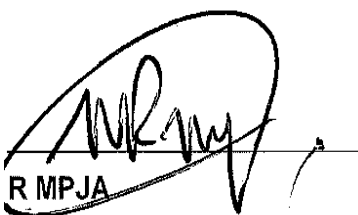
Next Review Date: **March 2024**

Disclosure Classification: **Controlled Disclosure**

APPROVED

**Matla Power Station
Documentation
Centre**

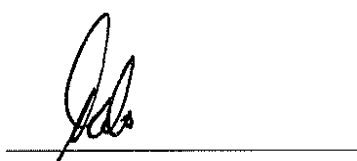
Reviewed by



**R MPJA
SUPERVISOR**

Date: 3/03/2021

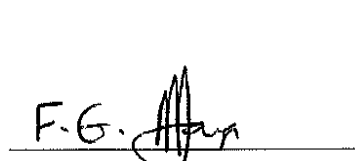
Functional Responsibility



**N NXUMALO
WORKSHOP MANAGER**

Date: 3/03/2021

Authorized by



**F.G. N. KHWELE
MAINTENANCE MANAGER**

Date: 2021/03/04

Content

Page

1. Introduction.....	3
2. Supporting Clauses	3
2.1 Scope.....	3
2.1.1 Purpose.....	3
2.1.2 Applicability	3
2.1.3 Effective date.....	3
2.2 Normative/Informative References	3
2.2.1 Normative.....	3
2.2.2 Informative.....	3
2.3 Definitions	4
2.3.1 Document:.....	Error! Bookmark not defined.
2.4 Abbreviations	4
2.5 Roles and Responsibilities	4
2.6 Process for Monitoring.....	4
2.7 Related/Supporting Documents.....	5
3. Document Content.....	5
3.1 Subheading	Error! Bookmark not defined.
3.2 Subheading	Error! Bookmark not defined.
4. Acceptance.....	6
5. Revisions.....	7
6. Development Team	7
7. Acknowledgements	7
Appendix A – Eskom Document Hierarchy.....	Error! Bookmark not defined.

Figures

Figure 1: Figure Example (Delete if not required).....	Error! Bookmark not defined.
--	-------------------------------------

Tables

Table 1: Table Example (Delete if not required)	Error! Bookmark not defined.
---	-------------------------------------

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

1. Introduction

A lifting operation is an operation concerned with the lifting and lowering of a load. A load is the item or items being lifted which could include a person or people. A lifting operation may be performed manually or using lifting equipment. Manual lifting, holding, putting down, carrying or moving is often referred to as 'manual handling of loads.

Lifting operations in construction occur during transportation of material from the storage place to the place where it is being processed, and during the processing of materials. A load includes any material or people that are lifted or lowered by lifting equipment.

Rigging is the equipment such as wire rope, turnbuckles, clevis, jacks used with cranes and other lifting equipment in material handling and structure relocation. Rigging systems commonly include shackles, master links and slings.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

To ensure that the correct steps are taken when lifting, transporting and off-loading a load with a lifting machine.

2.1.2 Applicability

Covers all lifting machines when lifting, transporting and off-loading a load.

2.1.3 Effective date

Same as authorization date

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

2.2.2 Informative

[2] Guideline: Maximum lifting and rigging loads for competent person - ETE0002.

[3] OMOP 2052 - Access control to and from the Ash dam complex.

[4] The OSHAct Driven Machinery Regulation 18. Lifting Machines and Lifting tackle.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

2.3 Definitions

2.3.1 Competent person: Means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.

2.3.2 Rigger Artisan: Means a person who is in possession of a trade certificate issued by an organisation approved for this purpose by the minister of labour.

2.3.3 Rigging: Manipulation of a load by making use of two or more lifting machines to move a load in suspension from one position to another.

2.3.4 Vertical lift: Lifting a load with lifting machines by making use of lifting tackle where the included angle of the lifting tackle does not exceed 90°.

2.3.5 Lifting tackle: Means chain slings, rope slings, rings, hooks, shackles, swivels, spreaders or similar appliances.

2.3.6 Lifting machine: Means a power-driven machine designed and constructed for raising or lowering a load, or moving it in suspension, and includes a block and tackle hoist, crane, lift truck or jib-crane, but not an elevator, escalator, goods hoist or builder's hoist.

2.4 Abbreviations

Abbreviation	Explanation
PPE	Personal Protective Equipment

2.5 Roles and Responsibilities

2.5.1 Supervisor's Responsibility

It is the responsibility of the Supervisor and lifting machine operator to ensure that this document is adhered to.

2.6 Process for Monitoring

Will be available on "EDMS" and "G Drive" (G:\data\omop) as soon as the document is signed by all stakeholders.

2.7 Related/Supporting Documents

2.7.1 The Mobile crane operation checklist must be completed and sent to the Supervisor.

2.7.2 The load test certificate is valid.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

2.8 Related/Supporting Documents

2.8.1 The Mobile crane operation checklist must be completed and sent to the Supervisor.

2.8.2 The load test certificate is valid.

3. Document Content

- 3.1** All lifting machines or mobile equipment to be operated by trained personnel who is in possession of a certificate of training.
- 3.2** Daily check sheets and pre-trip inspections to be completed for all lifting machines, mobile equipment including trailers.
- 3.3** Passengers are not allowed on mobile equipment unless a designated seat is in place for a passenger.
- 3.4** When using unbraked trailers, the weight of the trailer may not exceed the weight of the towing vehicle by more than 50% or 3500kg.
- 3.5** All loads to be secured by means of tie downs, chains or slings to the trailer or vehicle that is used for transporting with, regardless of the weight of the load.
- 3.6** No load may protrude more than 1.8m from the back of any trailer or vehicle.
- 3.7** Any competent person other than a Rigger Artisan may rig and lift any equipment at any angle up to 3 000 Kg.
- 3.8** Any competent person other than a Rigger Artisan may rig any equipment up to 10 000 Kg in a vertical lift (straight lift).
- 3.9** Any equipment which needs to be lifted at an angle other than vertical exceeding 3 000Kg to 10 000Kg may only be done by a Rigger Artisan.
- 3.10** Extreme caution should be taken on uneven road surfaces and when driving down slopes or Inclines (if the slope angle is > 5 degrees stop and consult with your supervisor). Lifting, transporting and off-loading pipes with a mobilift
- 3.11** Check the size/weight of the pipe/s to ascertain the correct nylon slings to be used. No chain slings to be used when lifting pipes.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- 3.12 Check the size/weight of the pipe/s to ascertain the correct number of pipes that can be carried by the mobilift, considering the capacity of the mobilift.
- 3.13 If pipes are stacked on top of each other, take the top pipe first.
- 3.14 When several pipes with no flanges are to be lifted, place them away from other pipes Across sand bags/wooden blocks or across one pipe. This will allow access underneath them with a nylon sling.
- 3.15 Ensure visibility between rigger and mobilift driver. If need be, a third person to give signals to the mobilift driver to be added.
- 3.16 Rigger should tie the pipe/s at the centre such that when they are lifted and swinging, they should not hit the mobilift. Otherwise the boom should be extended.
- 3.17 Rigger signals to mobilift driver to lift up pipe/s slowly.
- 3.18 Rigger checks that the pipe/s is/are level. Tie a rope around pipe/s on one end for controlling them. If pipe/s is/are to be moved by a mobilift, then the height of the stack of pipe/s should not be more than knee-high.

3.19 Transporting pipe/s:

- Pipe/s can be transported across or in parallel to the mobilift.
 - Whilst in motion, the rigger controls the pipe/s with a rope.
- 3.20 Before pipe/s can be off-loaded, check if there will be access to remove nylon sling. If not, place sand bags/wooden blocks or a pipe across.
- 3.21 Rigger should ensure that pipe/s is firm on placement area and not rolling, before untying the nylon slings and the rope.
- 3.22 Rigger should now signal to mobilift driver to retract the boom and pack up slings, rope etc.
- 3.23 Bigger pipes e.g. slurry (ash dams) pipes should be transported one at a time.

4. Acceptance

Name	Designation
Maserati Lesolang	General Manager
Thabo Gininda	Operating Manager
Pieter Potgieter	Risk and Assurance Manager
Mbali Mhlana	Environmental Manager

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

Name	Designation
Mandla Mkhonza	Procurement Manager
Noma Khwele	Maintenance Manager
Jabu Khoza	Production Manager
Jan Ngoepe	Production Manager
Boitumelo Mohale	Production Manager
Nomfundo Nxumalo	Production Manager
Oneck Malele	Finance Manager
Lele Masote	Engineering Manager
Nomphele Magongoma	Human Resources Manager
Thwadi Kekana	Outage Manager
Mike Nkosi	Training Manager
Koena Moholola	Program Manager

5. Revisions

Date	Rev.	Compiler	Remarks
March 2021	4	Ray Mpja	Document reviewed
February 2018	3	J Lourens	Document reviewed
August 2011	2	J Lynch	Document reviewed
August 2007	1	FJ Dlamini	Document reviewed
October 2012	0	FJ Dlamini	Initial document

6. Development Team

Not applicable (Document reviewed)

7. Acknowledgements

Not applicable (Document reviewed)

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

Appendix A - Mobile Crane Checklist

MOBILE CRANE OPERATION CHECKLIST			Yes	No
1	PRE OPERATIONAL INSPECTION CARRIED OUT	Visual inspection on Crane condition		
		Inspection of lights		
		Inspection of oil and water		
		Inspection of hook		
		Inspection of tyres		
		Inspection of gauges before and after start up		
2	CRANE POSITIONED AND LEVERS TESTED BEFORE TASK IS CARRIED OUT	Crane is positioned to meet job requirements Levers operate smoothly and in correct sequence to perform task		
3	SAFE WORKING LOAD IS NOT EXCEEDED	Weight of the load is known and correct slings for the application are selected. If not known or clearly marked, contact the supervisor.		
4	LIFTING AND LOWERING OPERATION	Load is lifted correctly		
		Load is lowered correctly		
5	LOAD IS TRANSPORTED SAFELY	Safe speed is maintained when transporting load		
		Load is secured when travelling		

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

		All road signs adhered to		

Crane Type:

Meter hours:

Operator:

Unique No:

Date:

COMMENTS: Safety belts in lifting machines are there for the same reason they are in cars, always use them.

.....
.....

SUPERVISOR: _____
NAME SIGNATURE DATE

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.