

RICHARDS BAY MINERALS		CODE OF PRACTICE	
		Effective Date: 10 June 2019	
APPLICABLE TO All Divisions	PROCEDURE NO COP 29	REVISION NO 13	PAGE 1 of 18
LIFTING OPERATION, EQUIPMENT AND MACHINERY			
Compiled by: Manager RMM – Smelting, Processing and Logistics			

1. OBJECTIVE

Lifting is an activity undertaken on a regular basis at RBM that has inherent risks that pose a danger to personnel and company property if not properly assessed and managed. This code of practice seeks to outline guidelines to identify, assess and control the risks inherent with lifting operations and lifting equipment.

To ensure that lifting equipment and machinery are used, maintained, inspected and stored in accordance with applicable standards and that employees are competent and properly trained in the use thereof, such that the safety of persons and equipment are not endangered.

This policy will apply to all personnel that carry out lifting operations or use lifting equipment at RBM regardless of whether they are RBM employees or contractors.

2. ROLES AND RESPONSIBILITIES

PERSONNEL	RESPONSIBILITY
Managers and Engineers	Administer the crane and lifting equipment program: <ul style="list-style-type: none"> ▪ Review and update the procedures and instructions ▪ Review and approve and comply with training with regard to cranes and lifting equipment ▪ Audit to ensure procedures are being followed ▪ Approve design and selection of lifting devices. (Engineering Review Required) ▪ Authorise a competent person in writing and file copy in Sharepoint folder ▪ Ensure compliance with RBM's Cranes and Lifting Equipment program ▪ Continuously review their areas / tasks and define which areas / tasks are to be included in these procedures and instructions ▪ Enforce and instruct employees in proper procedure for Cranes and Lifting Equipment ▪ Implement this policy with the onsite contractors ▪ Audit this program annually and revise it as appropriate
All Employees	<ul style="list-style-type: none"> ▪ Communicate to management any new critical lifts or conflicts with these procedures ▪ Follow the "Cranes and Lifting Equipment Procedures", including completing a "Pre-Lift Risk Assessment" prior to performing a lift using a crane as well as being trained and certified competent ▪ Follow the "Cranes and Lifting Procedures" when performing a critical lift or hoisting personnel when using a man basket ▪ Follow the "Cranes and Lifting Procedures" when utilizing lifting equipment

2.1 USAGE OF LIFTING EQUIPMENT AND MACHINERY

- a) **Only persons authorised in writing by the Engineer (2.13.3.1) are permitted to operate lifting equipment and lifting tackle.** The appointment letter (Appendix C) and carry cards (Appendix D / E) can be used as a guideline
- b) The user shall satisfy himself that all lifting equipment and machinery is safe to operate prior to use
- c) Critical lift tasks shall be evaluated by a rigger or other suitably trained person, prior to performing the lift
- d) The Engineer (2.13.3.1) shall ensure that all lifting attachments are designed, fabricated and maintained with an appropriate factor of safety
- e) The Engineer, supervisor or competent person in charge shall ensure that lifting equipment and machinery is used only for the purposes for which it was designed

The supervisor shall ensure that access to areas where lifting operations are carried out are restricted, protected and suitable procedures are in place to ensure that persons in the vicinity are not subject to hazards.

3. DEFINITIONS

3.1 Competent Person

A person who is trained in the proper use of hand signals, rigging techniques and in identifying hazardous or dangerous conditions when performing work with cranes and when utilizing rigging equipment. (The levels of lifting competency are described in Appendix A.)

3.2 Critical Lifts

Critical lifts are relatively complex lifts that include:

- multiple crane lifts;
- lifts over operating facilities where there is a danger to personnel or company property;
- lifts over or adjacent to power lines;
- lifts involving personnel man-baskets,
- lifts near the maximum rated loads of the lifting equipment (Exceeding 85% of rated load)
- The total weight on the hook exceeds 20,000 kilograms
- A combination of wind speed and load size that may cause / causes the load to sway
- There is a danger to personnel
- When indicated as a critical lift by as per RBM general procedure E29 GP 002
- Other lifts classified as critical as so determined from a risk assessment

3.3 Lifting Equipment

Any equipment, machine or arrangement of equipment or machines intended or used for the lifting, lowering, suspension or moving in suspension of any person or load.

3.4 Lifting Tackle

Means any attachment, including anchoring points, used to secure lifting equipment or a load to lifting equipment.

3.5 Lifting machinery – mobile

Refers to mobile cranes, lifting trucks (forklifts), jib cranes, barge cranes, hydraulic articulated man-lifts and “Cherry Picker” units (mounted on a motorised vehicle).

3.6 Qualified Person

A person with a recognized documented level of training in the operation of cranes, rigging analysis, evaluation and specification in the subject work for crane operations and rigging proficiency.

3.7 Risk Assessment

Providing a formal evaluation or analysis of the potential risk probabilities and consequences when performing maintenance tasks utilizing a crane and rigging equipment for hoisting materials or personnel when using a man basket.

3.8 Anti two block device

Anti-two block device is a system (alarm/horn) that alerts the operator when the hook block is nearing / coming in contact with the boom head of a crane.

3.9 Crane

Is a lifting machine equipped with a winder, wire ropes or chains and sheaves that can be used both to lift and lower materials and to move them horizontally. It uses one or more simple machines to create mechanical advantage and thus move loads beyond the normal capability of a human.

3.10 Hoist

It is a device used for lifting or lowering a load by means of a drum or lift-wheel around which rope or chain wraps. It may be manually operated, electrically or pneumatically driven and may use chain, fiber or wire rope as its lifting medium. The load is attached to the hoist by means of a lifting hook.

4 METHOD

4.1 SUPPORTING PROCEDURES

This Code of Practice must be read in conjunction with the following supporting procedures:

E29 GP 001 - Mounted cranes RBM standard
E29 GP 002 - Lifting and hoisting planning and recording
E29 GP 003 - Procedure for manual safe lifting operations
E29 GP 004 - Lifting of equipment with the use of Eyebolts
E29 GP 005 – Maintenance, inspection and testing Lifting Equipment

4.2 REQUIREMENTS FOR LIFTING EQUIPMENTS & MACHINERY

RBM requires a wide variety of lifts to be completed, some regular production lifts and some infrequent lifts. The following specific equipment requirements and standards apply to the use of various types of lifting equipment at RBM:

4.2.1 Factors of Safety

The following lifting tackle must have a minimum factor of safety of-

- a) ten (10) for natural fibre ropes
- b) six (6) for steel wire ropes, man-made fibre ropes and textile webbing
- c) four (4) for high tensile steel chains

4.2.2 Cranes and hoists

4.2.2.1 Pre Operational Safety Checklist

Crane operators must undertake a pre-operational safety check for each shift the crane is used and this should be kept with the crane. The detail required in the pre-operational safety check must be based on a risk assessment for that particular crane. The generic checklist in **Appendix B** can be used as a guideline.

The pre-use inspection must as a minimum include the following points to inspect and check:

- Pendant inspection:
 - Inspect pendant cable for any physical damage and wiring exposed.
 - The pendant push buttons are properly marked for each operating function and operates according to this function
 - The emergency button when operated stops all movement of the crane.
- Movement siren and rotating flash light in working condition
 - General rope condition including:
 - Any visible damage to strands and distortion in ropes due to kinks
 - Bottom hook block not damaged or bent and the safety catch is functional
- Check the functionality of top and bottom limits by physically driving the crane into the upper and lower limits.
- The crane brakes operate as soon as any pendant movement function button is released.
- Any unusual mechanical noise or jerky movements of the crane when operating.
- Ensure that the end stops on the crawl are in place and the bogey on the crawl it is not able to get past the end stops on a crawl

4.2.2.2 Mobile Cranes

All mobile cranes will have a loading chart fixed in a position visible to the crane operator or available in the crane cabin. Load spreaders/packing under outriggers/stabilizers shall be used where underfoot conditions are not known or where identified in the lift plan

All mobile cranes used at RBM whether owned or hired must be inspected before use and must in all cases be operated by suitably trained personnel. Hired cranes must arrive on site with relevant documentation that includes test certificates and as a minimum the pre-use safety inspection checklist derived from the crane manufacturer's inspection recommendations to ensure that the crane is fit for purpose. The pre-use safety inspection must ensure that:

- a) All safety devices are in place and in good working order.
- b) All lifting equipment conforms to this COP.
- c) The driver has been tested and is competent to drive and operate the mobile crane.

- d) All safety devices must be fail-safe and prevent the equipment operating outside of its safe working envelope.

4.2.2.3 Truck Mounted Cranes

Truck mounted cranes must be inspected and accepted safe for use by an RBM person who is deemed competent to inspect such cranes. Truck cranes inspections must be done on a 3 monthly basis and test certificates must be available in the truck. The person operating the crane must be trained and certified competent to operate such a crane. A copy of this certificate must be available in the truck. The risks involved in using a truck mounted crane must be assessed and all necessary precautions taken during the use of the crane. Attention must be given to the position of the operator. The control station must be located in an area that does not expose the operator to risks due to swinging loads.

4.2.2.4 Barge Mounted Cranes

Barge mounted cranes must be inspected and accepted safe for use by an RBM person who is deemed competent to inspect such cranes. Barge cranes inspections must be done on a 3 monthly basis and test certificates must be available. The person operating the crane must be trained and certified competent to operate such a crane and appointed by the engineer in charge according to the rating of the barge and crane. The risks involved in using a barge mounted crane must be assessed and all necessary precautions taken during the use of the crane. Attention must be given to the position of the operator. The control station must be located in an area that does not expose the operator to risks due to swinging loads

4.2.2.5 Overhead Travelling Cranes (OTC)

All overhead travelling cranes, including manual chain drive overhead travelling crane will be fitted with audible travel alarms, or equivalent warning devices. Where powered cranes share the same track then anti-collision devices must be fitted to avoid the cranes hitting other cranes or end stops in normal service conditions.

4.2.2.6 Crane Hoists

Where practicable all lifting hoists (Mobile Crane or OTC) should be equipped with an ultimate raise limit (anti two block device) to prevent the hoist load block from impacting on the hoist assembly, in the event of over raising. The system should provide both a visual and audible alarm to the operator. This limit must not be used as a process type-high level switch.

4.2.2.7 Crane Hooks

All lifting hooks (except for grab and chain shortening hooks), unless otherwise specified in a risk assessment, will be fitted with a safety latch or be designed to prevent the load from accidentally detaching.

4.2.2.8 Towing Equipment

Any lifting or rigging equipment used for towing purposes must be identified as such in order to prevent use in a lifting configuration.

4.2.2.9 Man boxes

Must have suitable edge protection and toe boards and must be effectively

secured to the vehicle to prevent it being displaced or tipped. Persons carried in the man box should be prevented from reaching any dangerous parts of the vehicle and protected against any overhead hazards that might exist.

4.2.2.10 Load-limiting device – All hoists must be fitted with a load limiting device to prevent overloading of the lifting equipment and machinery.

4.2.2.11 Load Cells

Where practicable or where the weight of a lift is uncertain, cranes should be fitted with a load cell with the weight of the load displayed in the visual range of the operator. If the crane does not have a dedicated load cell system then the use of a "Load link" type instrument with remote readout or alternatively checking of the load on the site weighbridge may be appropriate.

4.2.2.12 Overload prevention device

Chain block and lever hoists will be fitted with an overload prevention device, that will limit the load that can be lifted or pulled. This overload prevention device will ensure the SWL is not exceeded.

4.2.2.13 Crawl Beams

All crawl beams must be fitted with adequately sized end stops in order to ensure that it is not possible for the crawl bogey to get past the end stops on a crawl beam.

4.3 REGISTRATION AND IDENTIFICATION OF LIFTING EQUIPMENT

All lifting devices and equipment are to be marked and registered for inspection purposes.

The safe working load (SWL) of the lifting equipment and machinery shall be clearly marked. Where the SWL is dependant on the configuration of the equipment, then the SWL for each configuration shall be clearly marked or the information kept with the machinery.

Slings must be marked with a unique number and the SWL. This information must be engraved on a washer that is attached to the sling, or be marked on the thimble. Slings used for towing purposes should be marked in the same manner, but must include the wording '**Towing only**'.

4.4 PROCUREMENT OF NEW EQUIPMENT AND SPARES

4.4.1 Procurement of/or modification to lifting equipment. (Direct purchases by owning plant area)

All lifting equipment must be procured using an RBM Procurement Specification and/or applicable standards. All modifications must be sanctioned using the Change Management System (Refer to RBM Standard COP19.1) and may require a Procurement or Engineering Specification. The specification must consider as a minimum the following:

- a. Ergonomic risks
- b. The initial integrity of the equipment
- c. The environment in which it is to be used

- d. The purpose for which it will be used
- e. The materials of manufacture
- f. Access and egress if applicable
- g. Protection against slips, trips and falls if applicable
- h. Operator protection if applicable
- i. Strength and stability
- j. Compliance with applicable standards

In addition the purchasing plant area must:

- (a) Inspect relevant existing drawings to avoid duplication before submitting all the relevant information required that would enable a drawing to be produced by RBM or outside supplier/design consultant
- (b) Comply with RBM purchasing procedures as defined in the RBM Purchasing manual
- (c) Ensure that the identification is clearly stamped on all equipment
- (d) Ensure that "Proof Load" certificates are filed and kept in the relevant record book

Stores Personnel shall:

- (a) Upon receipt of any new/repaired/re-tested lifting equipment check that it:
 - Is stamped/labelled with an RBM Identification Number as per order details
 - Has a test certificate ("Proof Load" Certificate)
- (b) Forward the certification to planning department for record keeping

4.4.2 Procurement of lifting components

Lifting components are individual load carrying components or sub-assemblies that are used as part of a lifting assembly (for example wire rope, pins, and wire rope choker slings). These may be purchased either as items for repair and maintenance or may be purchased as "Stores Stock" items for routine maintenance or consumables. As these components form part of lifting equipment they will not have individual RBM Identification Numbers stamped/labelled. They will have individual test certification.

The purchasing plant area must:

- a. Ensure that any component delivered with a "Proof Load" certificate, such documentation is filed in an appropriate place.
- b. Ensure that no lifting component is assembled with lifting equipment unless they have checked the validity of the certification.
- c. Ensure that the lifting equipment is inspected/tested in an appropriate manner prior to entering service.

Stores Personnel shall:

Upon receipt of any lifting component check that it:

- Has a test certificate ("Proof Load" Certificate)
- Forward the certification to planning department for record keeping

4.4.3 Disposal of lifting equipment (Owning plant area)

It is a **line responsibility** to:

- a. Ensure that all items of lifting equipment that are identified as requiring disposal, for whatever reason, are rendered unusable prior to such disposal
- b. Ensure that all records are amended following disposal of any lifting equipment

4.5 STORAGE

All mobile cranes shall be parked with hooks tied back in the area demarcated. All other lifting equipment and machinery shall be stored in a protected and controlled environment, suspended where practical.

4.6 LIFT PLANNING & LIFT OPERATION

4.6.1 Site Lift Plan Register for critical lifts

The Engineer (2.13.3.1) will maintain a register of critical lifts for his/her area of responsibility. Critical lifts must have a documented plan that adequately addresses the associated hazards. Non-critical lifts do not require a detailed lift plan, but must be subjected to a risk assessment.

All lift planning and operation must be in accordance with the detailed requirements E29 GP 002.

4.6.2 Qualifications, Training and Competencies

- a) All non-critical lifts must be carried out by competent personnel. A person shall be declared competent after undergoing relevant training and such person is certified to have successfully completed the relevant training. Proof of such training must be recorded accordingly. The owner (responsible General Manager) will authorise the competent person in writing, and the original document will be filed by the responsible Engineer as proof of competence. In the case of temporary rigger personnel further testing and assessment may be necessary. Such training must include but not limited to:

- Selection of lifting gear and tackle
- Rigging methods and procedures
- Inspection of lifting gear and tackle

Refer to Appendix A - Competence and Training Matrix

- b) All lifts classified as critical, must be controlled by a qualified person who by virtue of his/her trade has qualified as a rigger. This qualified person shall, with the assistance of the engineer in charge, draw up a detailed lift plan for any such critical lifts.

- All riggers to be qualified as per the South African Qualification Authority Act prerequisites or be the holder of a recognised trade test in rigging at an accredited training centre
- To be competent by virtue of their experience and skills acquired in similar industry

Refer to Appendix A - Competence and Training Matrix

- c) The training provider to issue a signed certificate of competency, as well as to complete the relevant sections of the competency carry card (Appendix C) before the responsible Engineer (2.13.3.1) and General Manager Sec. 3(1)(a) & 7(2) signs.
- d) No person shall operate any equipment covered by this Code of Practice without a valid certificate of competence and competency carry card.
- e) A certificate of competence and a competency carry card (Appendix C and D) is only valid for a period of 24 months, from the date of issue, or for the period as stipulated by the Engineer (2.13.3.1). The competency carry card must also be signed by the General Manager Sec. 3(1)(a) & 7(2).
- f) Minimum operating time, frequency of operation and testing to ensure competency for each class of machine must be monitored.

4.6.3 SAFETY BARRIERS AND BARRICADING

- a) The lift plan must define the barricading required for the lifting operation
- b) Barricading must comply with E28 GP 004 – Safety barriers and barricading
- c) Lift plan to determine the safe distance to be established for barricading around the lifting operation taking the following into consideration
 - The counter weight slew area if crane is used
 - The shadow of the fall including the dimensions of the lift item and its likely fall characteristics.
- d) Barricading to effectively control unauthorised access to the area impacted by the lift
- e) For barricading specification refer to RBM procedure E 28 GP 004 - Safety Barriers and Barricading

4.6.4 Supervision

All critical lift rigging must be carried out under the supervision of a person competent to identify all hazards related to the tasks.

4.7 LIFTING OF PERSONNEL

The preference for lifting of personnel at RBM is by using purpose built lifting appliances e.g. Mobile Elevated Work Platform (MEWP). Lifting of personnel by means of crane suspended cages **must be minimised** and only used where no other practical method is available. Where such cages need to be used, the operation must be contracted out to experts in that field using dedicated equipment to their own procedures and authorised by the RMM or the Support Services Manager. Lifting of personnel in man boxes attached to forklift trucks is to be discouraged. All operations must be suitably supervised with a formal means of communication established.

4.8 TOWING

Equipment designed for lifting applications must not be used for towing or equipment designed for towing used for lifting. Equipment used for towing will be clearly identified.

4.9 ERECTIONS AND DISMANTLING OF CRANES

Cranes that require significant erection and dismantling procedures as part of their normal operation must be in accordance with the minimum requirements outlined in ES-SOP-MC-749.

4.10 MAINTENANCE, REPAIRS AND INSPECTION

- a) Lifting equipment and machinery shall be maintained in safe working condition at all times
- b) Repair to all lifting machinery must be carried out by competent persons and certified afterwards
- c) In the case of the lifting machinery, mobile crane repairs not affecting the integrity of the lifting mechanism, need not be certificated
- d) All defective equipment and machinery shall be suitably tagged out. Lifting equipment and machinery deemed unfit for use shall be discarded and indicated in the register
- e) The Engineer shall ensure that all lifting equipment and machinery is inspected, recorded and maintained at predetermined intervals, and as specified by E29 GP 005, by competent persons authorised in writing.
- f) The user shall inspect all lifting equipment prior to use
- g) Any maintenance or repair to equipment shall fully comply with the Manufacturers requirements
- h) All lifting equipment at RBM is to be inspected on a three monthly basis unless agreed otherwise with the machinery inspectorate. In the event that as a result of an inspection the equipment is found to be unsafe then the item is to be withdrawn from service until the machinery inspectorate is satisfied that it is safe to put back into use
- i) The Engineer shall ensure that registers for all lifting equipment on site are kept and maintained. This will form the basis from which the maintenance and statutory inspections are scheduled
- j) The Engineer will establish a maintenance and inspection plan for each crane and piece of lifting equipment that includes testing of:
 - Mechanical and electrical components
 - Controls for each piece of lifting equipment and rigging equipment
 - Crane cables and all lifting attachments
 - Structural integrity of the hoist, head frame, brakes, wheels, hooks, blocks and rails
 - Integrity of load limiting devices, safety devices, limit switches and control systems required for individual equipment (For example: independent "fail-safe" breaking systems, a device to stop the crane such as a "dead-mans switch", and emergency off switch)
 - Design loadings (Annual load test certification).
- k) Inspection forms must comply with the manufacturer's specifications and all applicable legislated codes and standards for the inspection of lifting equipment.
- l) The Engineer must establish the frequency and procedures for non-destructive tests on the cables, attachments and structural elements holding the conveyance.
- m) Authorisation to delay scheduled maintenance and inspection activities can only be approved by the Engineering Manager (2.13.1).
- n) Maintenance and Inspection Records

The Engineer must keep records of:

- Cable data including date of installation, maximum admissible legal life, construction and safety factor.
 - Cable inspection results compared with cable discard criteria.
 - Non-destructive inspections.
 - Maintenance activities
 - Insurance Inspections
 - Test certificates
 - Disposals
- o) All records are to identify the equipment identification numbers.
- p) All maintenance records are to be stored in the SAP system.

5. REFERENCES

- 5.1 Mine Health and Safety Act 29 of 1996 - Regulations 8.5
Mines and Works Act 27 of 1956 - Regulation 2.10.2
Occupational Health and Safety Act – Driven Machinery Regulations

The following SOP's and standards are valid and approved RBM controls that describe related activities to COP 29:

- 5.2 SANS 7593: Chain slings assembled by methods other than welding- Grade T(8)
SANS 8539: Forged steel lifting components for use with Grade (T) 8 chain
SANS 189: Short-link steel chain (medium tolerance) for lifting purposes
SANS 10307: Cranes, lifting and suspended equipment- Support documentation
and training
SANS 10296: Hand signals used with cranes and with lifting and suspended
equipment
SANS 1595: Forged steel lifting hooks for use with steel chains of strength grade
M(4), P(5), S(6), T(8) and V (10)
SANS 1126: Mechanical jacks
SANS 1592: Short-link steel chain (close-tolerance) for lifting appliances
SANS 2415: Forged shackles for general lifting purposes – Dee shackles and bow
shackles.
SANS 1640: Reconditioned manually operated chain blocks
SANS 1638: Pneumatically operated chain hoists
SANS 1636: Manually operated chain lever hoists
SANS 1637: Reconditioned manually operated chain lever hoists
SANS 1594: Manually operated chain blocks
SANS 1596: Drop forged eyebolts and eyenuts for lifting purposes
SANS 4309: Cranes- Wire ropes – Care, maintenance, installation, examination and
discard
- 5.3 C6 Rio Tinto Safety Standard for Cranes and Lifting Equipment
ES-SOP-MC-749 - 150 Ton crane: Site establishment and transportation
- 5.4 E29 GP 001 – Mounted cranes RBM standard
E29 GP 002 – Lifting and hoisting planning and recording
E29 GP 003 – Procedure for manual safe lifting operations
E29 GP 004 – Lifting of equipment with the use of eyebolts
E29 GP 005 – Maintenance, inspection and testing Lifting Equipment
E29 GP 006 – Delivery Driver Standards
E28 GP 004 – Safety barriers and barricading

6. APPENDICES

Appendix A - Competence and training matrix;
 Appendix B - Overhead crane register: Pre-operation checks for pendant and remote control;
 Appendix C - Competency appointment letter to operate lifting equipment and tackle;
 Appendix D – Basic / Intermediate Competency Card;
 Appendix E – Advanced / Rigger Competency Card;

7. REVIEW HISTORY AND APPROVAL

REVIEW HISTORY			COP No. 29	Rev 11
REV No	DATE	PAGE No.	DETAILS	
2	18.10.2000	2	Amended paragraph 3.3	
3	03.03.2002	1,3 & 4	Amended paragraphs 2, 3.7, 3.9 to include requirements for man-lifts following accident at Diavik diamond mine	
4	25.11.2005	All	Total rewrite to include requirements of the RT standard C6	
5	31.07.2006	1,2,3,6,7,9&10	Amended various sections in order to satisfy legislative requirements as per Government Gazette – 28333 5 and general rewrite.	
6	09.05.2007	2 & 6	Included Paragraph 3.2.2.1 Included points 3,4 & 5 under paragraph 3.6.2 Requirements (Rio Tinto standards C6)	
7	01.09.2009	All	Updated definition of “critical lift” Added new definitions: “Crane“, ”Hoist” and “Anti two block device”. Updated definition of “Critical Lift” Updated section 4.1 Supporting procedures Updated section 4.2.2.1 Pre operational checklist Updated section 4.2.2.2 (c) Mobile cranes Updated section 4.2.2.3 Truck mounted cranes Added section 4.2.2.11 Overload prevention device Added section 4.2.2.12 Crawl beams Updated section 2 Roles and Responsibility Section 5.1 Minerals Act Reg 16.98 to 16.104 repealed and replaced by MHS Reg 8.5 Section 5.4 Added E29 GP 004 – Lifting of equipment with the use of eyebolts & E29 GP 005 – Maintenance, inspection and testing Appendix A – Updated maximum lift load limits Appendix B - Added generic overhead crane checklist	

			Appendix C – Added generic appointment letter
8	23 June 2010	14	<p>Appendix A – Competence and Training Matrix</p> <p>Typical Roles : Intermediate rigging changed from only only Artisan to :</p> <p>By added Serviceman and Operator – only if recommended by the responsible engineer to carry out specific tasks</p> <p>Added Last Column: Operational Requirements</p> <p>In the case where there is a specific need for the operation of gantry cranes, truck mounted cranes, hi ab, fork lifts, etc., not covered by the above training matrix, specialized training must be arranged to cater for these specific equipments. These must be sanctioned by the responsible superintendent or engineer</p>
9	4 August 2010	4 & 11	<p>Under Point 4.1 and 5.4</p> <p>Removed ref :ES SOP MC 749 – 150 Ton Crane : Site establishment and transportation as this crane has been scrapped.</p>
10	12 Sept 2011	8	Item 4.6.2(a) Added sentence: In the case of temporary rigger personnel further testing and assessment may be necessary.
11	April 2015	All	<p>Complete Revision</p> <p>Added Appendices D & E – Rigging and Crane Competency Cards to be printed on Yellow and Lights Red Cardboard.</p>
12	Dec 2018	8 & 9	Item 4.6.2 – Included that the General Manager Sec 3(1)(a) & 7(2) appointee, to authorise the competent person in writing.
13	Junie 2019	4.6.3	Added Item 4.6.3 - SAFETY BARRIERS AND BARRICADING.

APPROVAL			
POSITION	NAME	DATE	SIGN
Manager: RMM Smelting and Processing	S. Houston-McMillan		
General Manager Smelting, Processing and Logistics	Simon Lebethe		

Appendix A:
Competence and Training Matrix

Skill Description	Non Lifter	Basic Rigging	Intermediate Rigging	Advanced Rigging
Training/Qualification	Nil	Has completed RBM two day training package or equivalent.	Has completed RBM four day training package or equivalent.	Has certificate of competency for rigging.
Typical Roles	Operator	Serviceman, Operator	Artisan, Serviceman, Operator - only if recommended by the responsible engineer to carry out specific tasks	Rigger.
Duties	Cannot complete or assist in any lifting or rigging tasks	Can complete simple slinging and lifting tasks provided a documented procedure exists and he/she has been tested to be competent in the procedure.	Can complete simple slinging and lifting tasks.	All, provided assessed as competent to perform the lift by the responsible engineer.
Complete RA for lift	No	No. Take 5 to support existing RA only	Yes	Yes
Can select lifting equipment for job.	No	No. Equipment specified in procedure must be used.	Yes unless a documented risk assessment for that particular lift has been conducted that specifies the minimum lifting gear required authorised by the responsible Engineer	Yes
Can use chain block to balance a load.	No	No	Yes	Yes
Can undertake a lift using more than one hoist or crane	No	No	No	Yes
Can undertake a lift using more than one chain block	No	No – unless a documented procedure exists and he/she has been tested to be competent in the procedure. Each chain block to be sized to handle full load.	No – unless a documented procedure exists and he/she has been tested to be competent in the procedure. Each chain block to be sized to handle full load.	Yes
Maximum Lift	0	3 tonnes unless a documented risk assessment for that particular lift has been conducted that specifies the minimum lifting gear required authorised by the responsible Engineer	5 tonnes unless a documented risk assessment for that particular lift has been conducted that specifies the minimum lifting gear required authorised by the responsible Engineer	Not limited.
Can take responsibility for critical lifts	No	No	No	Yes provided assessed as competent to perform the lift by the responsible engineer.
Can utilize lever hoist or other device to side pull.	No	No - unless a documented procedure exists and he/she has been tested to be competent in the procedure	Yes	Yes
Can utilize snatch block or other device to change direction of lifting force.	No	No	No	Yes
Can utilize frame,	No	No - unless a	No - unless a documented	Yes

beam clamp or sling to provide temporary anchor point for chain block.		documented procedure exists and he/she has been tested to be competent in the procedure	procedure exists and he/she has been tested to be competent in the procedure	
Operational requirements	In the case where there is a specific need for the operation of gantry cranes, truck mounted cranes, hi ab, fork lifts, etc., not covered by the above training matrix, specialized training must be arranged to cater for these specific equipments. These must be sanctioned by the responsible superintendent or engineer			

Appendix B:

Overhead Crane Register – Pre-operation checks for pendant and remote control								
Section :	Crane Description:						Date:	Week:
Items	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Remarks / Action
Emergency stop								
Hoist brake operation								
Limit switch top								
Limit switch bottom								
Hook and safety latch								
Sheaves								
Undue noise								
Smooth operation								
Loose/damaged parts								
Pendant and cable								
Rope visual condition								
Long traverse motor and brake								
Cross traverse motor and brake								
Cable trolley motion on cable rail								
Anti-collision								
Long & Cress traverse alarms								
Signature								
Inspected by - Name								
Note: When any deviation is found that requires repair, please enter the notification number in the "Remarks / Action" column.								

This printed copy is only valid for 20 June 2019

This register includes checks of overhead cranes only.
Inspection is to be carried out before the overhead crane is used. P = Pass F = Fail

Appendix C:



Name: _____

SAP No. _____

Date: _____

Dear Sir

APPOINTMENT TO USE LIFTING EQUIPMENT & LIFTING TACKLE

This serves to confirm your appointment in terms of the Mine Health and Safety Act, 1996(Act no 29 of 1996) regulation 8.5 to operate lifting equipment & lifting tackle during _____ level rigging tasks for which you have been found competent and have completed the prescribed training.

This appointment is valid for a period of 2 years from date of appointment.

Your attention is drawn to the requirements of RBM’s COP 29 and in particular the limits of the scope of lifting work as described in Appendix A.

Should you be unclear on any aspect of the scope of the application of this appointment, please feel free to raise this with myself or your supervisor.

2.13.3.1 Engineer

General Manager
Sec. 3(1) & 7(2)

I _____ acknowledge receipt of this appointment.

Signed: _____

Date: _____

Appendix D :

Attached pdf form to be used for Basic or Intermediate Rigging and printed on Yellow cardboard



Adobe Acrobat
Document

Appendix E :

Attached pdf form to be used for Advanced Rigging and printed on Red cardboard



Adobe Acrobat
Document