DEPARTMENT OF MINERAL RESOURCES AND ENERGY

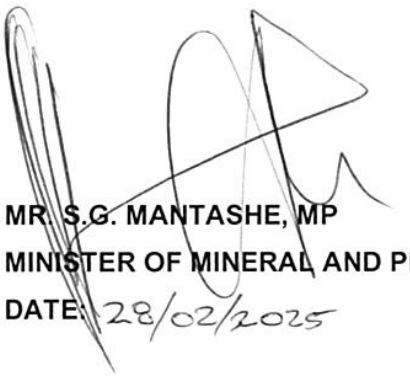
NO. 6054 **28 March 2025**

MINE HEALTH AND SAFETY ACT, 1996 (ACT NO 29 OF 1996)

AMENDMENTS TO THE REGULATIONS RELATING TO MACHINERY AND EQUIPMENT

I **Samson Gwede Mantashe,** MP, Minister of Mineral and Petroleum Resources, under sections 98 (1) (g) and (h) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and after consultation with the Council, hereby amend Chapter 8 of the regulations to the Mine Health and Safety Act, as set out in the in the schedule.

As a consequence of the amendments, chapter 16 of the Mine Health and Safety Regulations (Minerals Act) is hereby repealed in its entirety.



MR. S.G. MANTASHE, MP
MINISTER OF MINERAL AND PETROLEUM RESOURCES
DATE: 28/02/2025

SCHEDULE

Amendment of Chapter 8 of the regulations

1. Chapter 8 of the regulations to the Mine Health and Safety Act is hereby amended by the addition after regulation 8.12 of the following regulations:

8.13 Shafts and winders

Definitions

For purposes of regulation 8.13, unless the context otherwise indicates:

'Abnormally tight winding rope' means any load exceeding the total payload which includes the mass of the **suspended load** as prescribed on the winding plant permit;

'Approved winding rope testing station' means a testing station approved by the Chief Inspector of Mines for the destructive testing of ropes used in a **winding plant**;

'Attached load' means everything suspended from or attached to the winding rope and includes the portion of any balance rope and one half of any tail carriage and one half of any sheave which contributes to load at the termination of the winding rope;

'Attachments' include everything suspended from or attached to the conveyance other than the winding rope and includes any balance rope;

'Automatic winding plant' means a **winding plant** that is automatically operated;

'Balance winding rope' includes tail rope, balance rope or balance chain;

'Banksman' means a person stationed at the shaft top, who shall be the holder of an onsetter's certificate, appointed by the manager to supervise the loading and unloading of persons, **material** and **explosives** in the cage, skip, or other means of conveyance and to give the necessary signals;

'Drive' means, for the purpose of regulation 8.13.105, any action requiring skill whereby the control levers of the **winding plant** are manipulated in such a way that the winding engine moves in direct relation to the movement of the lever;

'Explosives' shall have the same meaning as is assigned to that term in the Explosives Act, 2003 (Act No. 15 of 2003);

'Effective length of rope' means the length of the winding rope from the clove hitch knot or on the drum over the sheave or drum in the headgear and the humble hook or attachment mechanism to the conveyance;

'Initial breaking strength' means the maximum load capacity of a sample of a new rope as determined by the destructive testing in accordance with the applicable testing standards, at an **approved winding rope testing station**;

'Material' means whatever may be conveyed by means of a winding plant elevator or self-propelled mobile machine excluding persons, minerals and **explosives**;

'Nominal rope diameter' means the rope diameter specified by the manufacturer;

'Onsetter' means a person who shall be the holder of an onsetter's certificate issued by the Principal Inspector of Mines and appointed by the manager to have charge of a cage, skip or other means of conveyance underground in which persons, **material**, equipment and **explosives** are being raised or lowered and to give the necessary signals;

'Prescribed permit' means a winding plant permit prescribed by these regulations;

'Recoverable recordable system' means any recordable system that will retain the data captured therein indefinitely and which:

(a) captures the time and date of every entry, name and signature of every person making an entry;

(b) allows for the retrieving of all data captured;

(c) Incorporates measures to prevent unauthorised changes to any captured data;

(d) is auditable; and

(e) in the case of an electronic system, is backed up at least weekly;

'Semi-automatic winding plant' means a **winding plant** that can be operated partly manually and automatically;

'Shaft' means any tunnel having a cross-sectional dimension of 3,7 metres or over and -

(a) being inclined to the horizontal of 15 degrees or over; or

(b) being inclined to the horizontal of less than 15 degrees but more than 10 degrees where the speed of traction may exceed two metres per second;

'Slack winding rope' means any loss of tension of the rope due to risk factors such as the obstruction of the free movement of the conveyance between highest and the lowest point of winding;

"Station level" means the bank and any level in a **shaft**, at which conveyances stop for the loading or unloading of persons, equipment, **material**, minerals or **explosives**;

'Shaft station' means the area surrounding the **shaft** at every **station level** and identified and demarcated as the **shaft station** by the employer;

'Suspended load' means the sum of the **attached load** and the mass of the **effective length of rope**.
'The Act' means the Mine Health and Safety Act, Act No. 29 of 1996, as amended;

'Winding cycle' means a full or partial return trip starting with a conveyance at the bank level and ending with the same conveyance returning to the bank level;

'Winding Engine Driver' means a person who is the holder of a **Winding Engine Driver** Certificate issued by the Chief Inspector of Mines and appointed by the manager for the purpose of safely transporting persons, **material**, equipment, mineral and **explosives** up and down the **shaft**;

'Winding plant' means any hoist or other appliance used or intended to be used for the conveyance of persons, **material**, **explosives** or mineral by means of a cage, skip or other means of conveyance in any **shaft** or **winze** where the control system of the driving machinery can normally be operated manually or automatically from the motor or engine room, but excluding any lift or elevator, lifting machine, endless rope haulage and scraper winch installation;

'Winze' means any tunnel having an inclination below the horizontal in the direction of working of more than 5 degrees and not included in the definition of "**shaft**".

Requirements for the Conveyance of persons in shafts and winzes

8.13.1 The manager of a mine shall not use a **winding plant** nor permit any other person(s) to use such **winding plant** unless that person is in possession of a **prescribed permit** or permission issued by a Principal Inspector of Mines.

8.13.2 No person shall ride, cause or permit any other person to ride in or on a conveyance operated by a **winding plant**, unless it is permitted by a **prescribed permit** or permission.

8.13.3 Every application for the use of a **winding plant** shall be made to the Principal Inspector of Mines according to the **prescribed permit** or permission.

8.13.4 The Principal Inspector of Mines may grant a permit or permission to use such **winding plant**, subject to conditions as he may specify.

8.13.5 The permit or permission shall be kept at the mine manager or engineer office and a legible and suitably protected copy thereof shall be displayed in the winding engine room.

8.13.6 The Principal Inspector of Mines may direct that any regulation to the Mine Health and Safety Act dealing with lifts or elevators shall apply to an automatic or **semi-automatic winding plant** by giving written notice to that effect to the manager, with specific reference to the regulation concerned, whereupon such regulation shall apply to such **winding plant**.

8.13.7 The manager of a mine must carry out specific or periodic tests or inspections of any **winding plant** as determined by the risk assessment, or when directed to do so by the Principal Inspector of Mines.

8.13.8 In calculating the total mass of persons to be conveyed in a **winding plant**, a minimum of 75 kilograms shall be allowed for each person.

Design of winding engine

8.13.9. The winding engine shall be such that:

8.13.9.1 when running at various speeds with light or heavy loads it can be readily slowed and stopped and after being stopped it can be restarted immediately in either direction; and

8.13.9.2 it can lift the maximum unbalanced load on the drum from the bottom to the top of the **shaft** or **winze**.

Brakes and Holding power.

8.13.10 Each winding drum or winding sheave that is fitted with a braking system shall be provided with an adequate brake or brakes which shall be kept in proper working order.

8.13.10.1 For drum type of winding engines where the rope is securely attached to the winding drum the brake or brakes, without the assistance of any counterbalancing effect of any load supported by the other drum, shall be capable of holding without slipping a load on the rope equivalent to the combined mass of:

a) the conveyance and its **attachments**;
b) the maximum permitted mass of mineral, or double the maximum permitted mass of persons, or the maximum permitted mass of **material** together with double the maximum permitted mass of persons when both **material** and persons are conveyed simultaneously, whichever is the greatest; and
c) the mass of the rope between the sheave and the conveyance, when the conveyance is at a point in the **shaft** which produces the maximum static Torque or Amps on the brakes.

8.13.10.2 For a friction drive or sheave type winding engine where the rope or ropes are not securely attached to the winding drum or winding sheave, the brake or brakes shall be capable of holding without slipping the maximum static out-of-balance load which occurs when one of the conveyances, or where a counterpoise is used, the conveyance:

a) is loaded with the permitted mass of mineral; or
b) is loaded with double the mass of the permitted number of persons; or
c) is loaded with double the permitted mass of **material** together with double the mass of the permitted number of persons when both **material** and persons are conveyed simultaneously; or

d) is removed from its bridle.

8.13.11 All conveyances in the **winding plant** used for the regular transport of persons, including persons engaged in repairs or shaft work, shall be equipped with a means of removing persons from the **shaft** in case of an emergency.

8.13.12 Every winding drum shall have flanges or horns, and if conical or spiral, such other appliances to prevent the rope from slipping off or coiling unevenly.

8.13.13 For friction drive or sheave type winding engines, where no part of the rope is securely attached to the winding drum or sheave, there shall be no dangerous slipping of the rope on such drum or sheave under any possible working conditions.

8.13.14 Every winding drum at the driver's right-hand side, or where only one drum is used it shall have an overlay rope.

8.13.15 The reversing lever of every steam or air operated winding engine and the control lever of every electrically operated winding engine shall follow the overlay rope in the direction of travel.

8.13.16 Where a hand-operated brake lever is provided on any winding engine it shall be pulled towards the driver to apply the brakes.

8.13.17 The relief and throttle valve levers of every steam or air operated winding engine shall be in a central position.

8.13.18 The operating mechanism and locking device of the clutch of every winding drum shall be:

a) provided with a locking arrangement which shall be used to prevent the inadvertent withdrawal of the clutch. If the clutch is not clearly visible from the driver's operating position, means shall be provided to indicate to the driver at all times the extent to which the clutch is engaged or disengaged; and

b) of such a design that inadvertent creeping in of the clutch is prevented when the clutch is disengaged.

8.13.19 For every double drum winder of which one drum can be unclutched it shall be impossible to:

a) unclutch any winding drum unless the brake or brakes of such drum are fully applied;
b) release the brake or brakes of such drum until the clutch is fully engaged and securely locked;
c) unclutch both drums at the same time; and
d) exceed 2.5m per second when any one of the clutches are withdrawn.

8.13.20 All bolts and fittings of winding drums, brakes and clutches shall be rendered secure by means of suitable locking devices.

8.13.21 In addition to any marks on the drum or rope, every winding engine shall be provided with reliable depth indicators.

8.13.22 Where the length of wind below the uppermost landing place for persons exceeds 100 metres, adequate provision shall be made whereby the winding-engine driver is warned of the arrival of the ascending or descending cage, skip or other means of conveyance at a point in the **shaft**, the distance of which from the uppermost or lowest, landing place for persons is not less than the equivalent of three revolutions of the drum or sheave of the winding engine.

8.13.23 Every winding engine shall be fitted with at least one effective automatic overwind prevention device, as well as an effective automatic overspeed prevention device.

8.13.24 When the designed allowable speed of a winder is reduced due to site specific conditions, the over speed prevention device is set to suit the site-specific conditions.

8.13.25 The employer must install a device or combination of devices:

a) that detect **slack winding rope** and **abnormally tight winding rope** conditions on every **winding plant** in which the rope is attached to the drum operating in a vertical **shaft**, excluding a **shaft** in the course of being sunk; and

b) that must on detection of the **slack winding rope** and **abnormally tight winding rope** conditions either automatically halt all winding operations in the vertical **shaft** safely or warn all winding engine drivers operating in such **shaft** of such conditions.

8.13.26 The employer must establish an effective and safe procedure for rectifying any **slack winding rope** or **abnormally tight winding rope** conditions.

8.13.27 All winding operations in the vertical **shaft:**

a) shall cease when any **slack winding rope** or **abnormally tight rope** condition occurs, except if such operations are necessary for rectifying such a **slack winding rope** or **abnormally tight rope** condition. In such an event, such operations shall be authorised by the appointed engineer except where the appointed engineer has been given a detailed and recorded report of the **slack winding rope** or **abnormally tight winding rope** condition by a responsible person appointed by the manager;

b) may not resume unless the **slack winding rope** or **abnormally tight rope** conditions above have been rectified and the responsible appointed engineer is satisfied that winding operations may continue safely; and

c) shall have a **recoverable recordable system** for the recording of all incidents relating to **slack winding ropes** and **abnormally tight winding ropes**.

8.13.28 The employer must take reasonably practicable measures to ensure that:

a) a winder with a permitted speed exceeding 5 metres per second is equipped with a speed indicator and a recoverable recording device that records at least time and speed;

b) the information recorded is kept readily available at the mine for a period of at least 30 days; and

c) the speed indicator shall be so situated that the winding speed can be easily read at all times by the winding-engine driver from his operating position, and which speed indicator shall be used and maintained in efficient working order.

Statutory test for brakes

8.13.29 If the means of removing persons from the **shaft** is by means of emergency brake release, the braking system must be tested at intervals not exceeding 200 days.

8.13.30 At any speed above 2,5 m/s the maximum deceleration measured at the drum for a person ("men") and/or **material winding plant** must not exceed 4 m/s^2 and for a mineral **winding plant** ("rock") must not exceed 4,5 m/s^2.

Winder and shaft safety measures

8.13.31 No winding engine plant shall be operated in automatic mode when transporting persons, materials and **explosives** to underground workings if the **winding engine driver** is not in control of such winding engine plant and be seated on the foot plate at all times.

8.13.32 Regulation 8.13.31 shall not be applicable to a winding engine plant in automatic mode used solely for the purpose of transporting minerals.

8.13.33 No **winding engine driver** or any other person shall be allowed to be in charge of the winding engine if under the influence of intoxicants or is reasonably suspected of being under the influence of intoxicants.

8.13.34 No person shall tamper with or modify any safety devices of a winding engine plant without the prior written consent of the appointed engineer responsible for such affected winding engine plant. Provided that, if any repairs are conducted on such safety devices, they are recorded and reported to the appointed engineer by the quickest possible means.

8.13.35 No person shall repair, modify or maintain any winding engine plant including its safety devices at any time while there are persons inside the conveyance or who may be affected in the shaft barrel, shaft bottom or headgear except if such measures are necessary for the offloading of persons before fault finding is done.

Statutory requirements for winding ropes

8.13.36 Any newly installed winding rope, balance rope or guide rope and the rope connections of any such rope:

a) must be carefully examined by the engineer and may not be used for the raising or lowering of persons until the conveyance loaded with the maximum permitted mass has been run for two complete test trips between the highest and lowest stopping places ordinarily in use; and
b) must be magnetically tested or rope condition tested its entire length prior to the **winding plant** put into operation.

8.13.37 The engineer, in addition to recording the results, must record and sign the results of the examination immediately in the Winding Engine Driver's Logbook provided.

8.13.38 When any winding rope, balance rope or guide rope is installed or in use is replaced the particulars specified in the MD208 form (Notice of removal of ropes) must be submitted to the Principal Inspector of Mines.

8.13.39 In determining, the minimum allowable breaking strength of any rope used in a **winding plant**, the weight in Newtons of any mass carried by the rope must be obtained by multiplying this mass in kilograms by a factor of 9,8.

8.13.40 Where a conveyance is suspended by two or more winding ropes:

a) such ropes must be of equal **nominal rope diameter** and approximate strength;
b) arrangements must be made to equalize the tension in the ropes; and
c) each winding rope must be assumed to carry an equal share of the **attached load** for purposes of calculating rope selection factors.

8.13.41 The condition of a winding rope or balance rope must be assessed in accordance with the *SANS10293: Condition Assessment of Steel Wire Ropes on Mine Winders*, as amended and the rope may not be used if the condition thus assessed at that point in the rope has reached the discard criteria.

8.13.42 Where a winding system operating in a vertical **shaft** and not using a balance rope is such that it allows for the periodic tensile testing of the winding rope, the winding rope must have an **initial breaking strength** of not less than:

a) eight times the **attached load**; and
b) four and a half times the **suspended load**.

8.13.43 Provided, where a winding system operating in a vertical **shaft** and not using a balance rope -

a) allows for the periodic tensile testing of the winding rope; and

b) complies with the *SANS10294: Performance, Operation, Testing and Maintenance of Drum Winders relating to Rope Safety,* as amended, the winding rope must have an **initial breaking strength** as specified in that standard.

8.13.44 Where a **winding plant** operating in an incline **shaft** allows for the testing of the winding rope, the winding rope must have a breaking strength not less than-

a) ten times the incline component of the **attached load**; and

b) five times the incline component of the **suspended load**.

8.13.45 Where a **winding plant** using a balance rope or ropes does not allow for the periodic tensile testing of the winding rope or ropes, the **initial breaking strength** of the rope must not be less than 8.1 times the **suspended load**, provided that this factor may be reduced by 0.00135 for every metre of the **effective length of rope**, but the factor must not be less than:

a) 6,75 where the conveyance is suspended by a single winding rope; or

b) 6,19 where the conveyance is suspended by 2 or 3 winding ropes; or

c) 5,62 where the conveyance is suspended by 4 or more winding ropes,

Provided that where a winding system operating in a vertical **shaft** not using a balance rope allows the periodic testing of winding ropes as required and each conveyance is suspended by two or more ropes in conjunction to rope tension compensating system constructed in a way the failure of one rope will not result in momentary lowering of the force acting in any rope, breaking strength of ropes at installation must be specified or 0.95 times or whichever is the greatest.

8.13.46 The breaking strength of a guide rope used in a winding system must not be less than five times the combined weight of the rope and its tensioning weight.

8.13.47 Any rope which is used to raise or lower a stage in a **shaft** must have a breaking strength at installation of not less than 4,5 times the combined weight of the **effective length of rope** and its share of the **attached load**.

8.13.48 A sample of every winding rope in use must be cut from the end attached to the conveyance or counterweight at intervals not exceeding six months unless the winding system does not allow shortening of the winding rope. The length of the sample must be as specified by an **approved winding rope testing station**.

8.13.49 Where winding ropes are connected to a compensating sheave on the conveyance or counterweight, that part of the ropes that is in contact with the sheave must be cut off and the ropes re-terminated at intervals not exceeding three (3) months.

8.13.50 The manager must send the sample of a rope cut for tensile testing within two weeks to an **approved winding rope testing station** where the breaking strength and general condition must be determined.

8.13.51 For every tensile test carried out by the **approved winding rope testing station**, the manager must be provided with a certificate showing the results of the test performed.

8.13.52 If the sample of the winding rope received at the **approved winding rope testing station** is in a condition not permitting a satisfactory test, the manager must upon request of the **approved winding rope testing station** provide a new sample.

8.13.53 Except for friction drive or sheave type of winding engines, there shall not be less than three turns of rope upon the drum when the cage, skip or other means of conveyance is at the lowest point in the **shaft** or **winze** from which hoisting is carried out and the end of the rope where applicable shall be fastened securely round the arm or the **shaft** of the drum.

8.13.54 A spare rope which complies to these regulations shall be kept in reserve and readily available.

Requirements at shafts being sunk

8.13.55 For the purpose of work in a **shaft,** it shall not include work at the bottom of a **shaft** or **winze** in the course of being sunk.

8.13.56 The **winding engine driver** shall control the speed of the winding engine in such a manner as to ensure that when any bucket or other means of conveyance is approaching or passing through the stage, or the covering provided in accordance with the requirements of this regulation , it does so slowly and safely and that the crosshead is picked up or released, as the case may be, without shock.

8.13.57 The bucket or other means of conveyance shall not be lowered directly to the bottom of the **shaft** if men are present but shall be stopped by the winding-engine driver at least five metres above the bottom and shall not be lowered further until the signal has been given by one of the sinkers thereat.

8.13.58.1 In a vertical **shaft** where sets are used to support the guides, guides shall extend down to the lowest set which shall not be more than 15 metres from the bottom, and when winding is being done to the bottom the crosshead shall travel to the lowest set but one. In a vertical **shaft** where the guides are not supported by sets, the guides for conveyances shall extend down to 30 metres or less from the bottom, and when winding is being done to the bottom the crosshead shall travel to as near the end of the guides as is practicable.

8.13.58.2 Every vertical **shaft** or **winze** where a crosshead is used to guide the bucket or other means of conveyance, shall be equipped with:

(a) an effective device so arranged as to prevent the bucket or other means of conveyance from being lowered below the shaft bank if it is unaccompanied by the crosshead; and

(b) an effective device which will prevent the bucket or other means of conveyance and the crosshead from separating unintentionally anywhere in the **shaft** or **winze**, or which will automatically warn the **winding engine driver** should such separation take place.

8.13.58.3 No person shall work or be caused or permitted to work at the bottom of the **shaft** unless protected by an adequate covering extending over the whole area of such **shaft**, sufficient space only being left therein for the passage of any bucket, skip or other means of conveyance. In a vertical **shaft** such covering shall be situated not more than 25 metres from the bottom. In an inclined **shaft** such covering shall be situated not more than 30 metres from the bottom.

8.13.58.4 In a **shaft** or **winze** being sunk or equipped, clutching may be performed with a sinking platform winder with such persons on the sinking platform necessary to ensure that the operations are carried out safely.

Construction requirements of winding plant conveyances

8.13.59 Every cage used for the regular conveyance of persons shall be of substantial construction and shall be provided with a proper roof or cover and doors. The cage shall be enclosed in such a manner as to prevent any portion of the body of a person therein from accidentally coming into contact with the timbering or other equipment in the **shaft** or **winze** or the sides of the **shaft** or **winze**. The doors shall be securely attached to the cage and so arranged that they cannot be opened outwards or accidentally. Provision shall be made for adequate ventilation through the cage.

8.13.60 Every skip or kibble, used for the regular conveyance of persons in a vertical or steeply inclined **shaft** or **winze** shall be provided with a substantial roof or cover that will safeguard the occupants.

8.13.61 Every conveyance used for examining, repairing or doing other work in a vertical or steeply inclined **shaft** or **winze** shall be provided with a substantial roof or cover and shall be sufficiently enclosed to protect any person from accidentally falling out.

8.13.62 Where the roof or cover of a cage, skip or other means of conveyance is used as a platform for persons engaged in examining, repairing or doing other work in a vertical or steeply inclined **shaft** or **winze**, the persons so engaged shall be protected by a hood or cover immediately above them. Such hood or cover shall be removed as soon as this work is completed.

8.13.63 No trailer:

(a) shall be used in a **shaft** or **winze** where persons are regularly conveyed;

(b) shall be attached to a conveyance when such conveyance is used for transportation of persons; and

(c) shall be used for the regular conveyance of persons, unless it is allowed by the permit issued in terms of these regulations: Provided that for the purpose of this regulation, **'trailer'** shall mean any conveyance operated by a winding engine and which is attached to but not forming an integral part of the permanent conveyance, and of which the lateral movement is restrained by means of guide shoes or wheels running on or in guides or tracks.

Connection to winding plant conveyances

8.13.64 No rope, bar, link, chain or other connection shall be used for winding purposes unless it is of good quality and manufacture, free from any visible defect and of adequate calculated strength.

8.13.65 The connection between:

(a) any winding rope and the cage, skip, bucket, kibble, or other means of conveyance or counterpoise;

(b) any balance rope or tail rope and the conveyance or counterpoise; and

(c) any connecting rope and the conveyance, any trailer or other attached conveyance;

shall be such that no accidental disconnection can take place.

8.13.66 At intervals of not more than six months the connections between:

(a) any winding rope and the conveyance or counterpoise;

(b) the conveyance and any trailer or other attached conveyance; and

(c) any balance rope or tail rope and the conveyance or counterpoise,

shall be annealed or given proper heat treatment or shall be discarded and replaced. With connections of a class of steel approved by the Chief Inspector of Mines, the interval for heat treatment may be extended with the written permission of the Chief Inspector of Mines.

8.13.67 A proper record shall be kept by the responsible engineer of the non-destructive testing, refurbishment and working life of any part connecting the conveyance to the winding rope. All such connections and their component parts shall be marked clearly for the purpose of identification.

Winding plant signalling arrangements.

8.13.68 The following standard code of signals shall be used and strictly observed where a **winding plant** is operated at a **shaft** or **winze**:

Knocks or rings-	
1.....	Raise when engine at rest.
1.....	Stop when engine in motion.
2.....	Lower.
3.....	Persons about to travel.
3.....	In reply: persons may continue to travel or may enter the cage or other conveyance for the purpose of travelling.
3.....	From engine driver when cage or other conveyance containing persons is brought to rest at a station: persons may leave the cage or other conveyance.
2 pause 2.....	From driver (clear signal requested): driver wishes to start the winding engine at his discretion.
	[Code of signal substituted by GN R2703 of 11 December 1981]
2 pause 2.....	To driver (clear signal): driver may start the winding engine at his discretion.

Knocks or rings-	
	[Code of signal substituted by GN R2703 of 11 December 1981]
2 pause 2 pause 2	From driver: persons must leave the conveyance.
2 pause 2 pause 2	In reply: no persons in conveyance.
2 pause 2 pause 2 pause 2	Cancel or repeat signal.
3 pause 3 pause 3	Person giving signal is about to travel.
3 pause 3 pause 3	In reply: acknowledgement by driver that person signalling is about to travel.
4 pause 1.....	Raise slowly.
4 pause 2.....	Lower slowly.
4 pause 4.....	To driver: 'mark' signal.
4 pause 4.....	In reply: acknowledgement by driver of 'mark' signal.
4 pause 4 pause 4	To driver: clutching signal.
4 pause 4 pause 4	In reply: clutching operations completed.
5 pause 5.....	To driver: **explosives** about to be placed in the conveyance.
5 pause 5.....	In reply: **explosives** may be placed in the conveyance.
5 pause 5.....	From driver when conveyance containing **explosives** is brought to rest at a station: **explosives** may be removed from the conveyance.
5 pause 5 pause 5	To driver: no **explosives** in the conveyance.
5 pause 5 pause 5	In reply: acknowledgement by driver that there are no **explosives** in the conveyance.
6 pause 6.....	To driver: winding compartments served by engine locked.
6 pause 6.....	In reply: acknowledgement by driver of 'compartments locked' signal.
6 pause 6 followed by station signal	To driver: winding compartments served by engine locked below station designated.
6 pause 6 followed by station signal	In reply: acknowledgement by driver of 'compartments locked below station designated' signal.

Knocks or rings-	
6 pause 6 pause 6	To driver: compartments served by engine reopened.
6 pause 6 pause 6	In reply: acknowledgement by driver of 'compartments served by engine reopened' signal.
6 pause 6 pause 6 pause 6	To driver: **shaft** examination and repairs about to take place.
6 pause 6 pause 6 pause 6	In reply: acknowledgement by driver of '**shaft** examination and repairs' signal.
7.....	To driver: persons about to have access to the conveyance for a purpose other than travelling or the loading or unloading of minerals in trucks or of **material**.
7.....	In reply: persons may have access to conveyance for a purpose other than travelling or the loading or unloading of minerals in trucks or of **material**.
7 pause 7.....	To driver: conveyance is clear of all persons who have had access to it for a purpose other than travelling or the loading or unloading of minerals in trucks or of **material**.
7 pause 7.....	In reply: acknowledgement by driver of 'persons clear' signal.
15.....	Electrician is testing bells.
15.....	In reply: acknowledgement of 'bell testing' signal.
15 pause 2 pause 2	Electrician has completed test.
10 followed by station signal	Accident to person: station where conveyance is required.
1 long ring.....	Accident to **shaft**: winding operations to be suspended immediately in all compartments of the **shaft**.
In any purely mechanical signalling system 'continued ringing' shall replace 'one long ring' for the 'accident to **shaft**' signal. When raising or lowering mineral in trucks or **material** other than **explosives**:	
8.....	To driver: raising or lowering of minerals in trucks or of **material** about to commence.

Knocks or rings-	
8.....	In reply: acknowledgement by driver that raising or lowering of minerals in trucks or of **material** is about to commence.
1.....	From driver: persons may have access to conveyance for the purpose of loading or unloading minerals in trucks or **material**.
8 pause 8.....	To driver: raising or lowering of minerals in trucks or of **material** completed.
8 pause 8.....	In reply: acknowledgement by driver that raising or lowering of minerals in trucks or of **material** is completed.

8.13.69 In addition to the standard code of signals, other signals may be used provided that they have been approved in writing by the Principal Inspector of Mines.

8.13.70 Any person acting in conflict with the standard code of signals or of any of the other signals approved in writing by the Principal Inspector of Mines and used on a mine shall be guilty of an offence.

8.13.71 No person shall enter or have access to or be permitted to enter or have access to a cage or other conveyance for any purpose whatsoever or shall continue to travel in a cage or other conveyance or shall leave or be permitted to leave a cage or other conveyance unless and until the appropriate signals have been exchanged, or, if a signal cannot be given on the bell system, some other appropriate and distinct signal has been received from the **winding engine driver**.

8.13.72 Every **shaft** in which winding is carried out, other than a **shaft** in the course of being sunk, shall be provided with some efficient signalling arrangements in respect of each **winding plant** for interchanging distinct and definite signals between:

(a) the **winding engine driver** and the bank; and

(b) the **winding engine driver** and every established point below the bank from which winding is carried out.

8.13.73 Every **shaft** where persons travel on or in the conveyance while carrying out any examination, repair or other work shall be provided with some efficient means, approved by the Principal Inspector of Mines whereby the persons doing such examination or work can signal effectively from any depth in the **shaft** to the **winding engine driver**.

8.13.74 Every inclined/declined **shaft** in the course of being sunk shall be provided with some efficient signalling arrangement in respect of each **winding plant** for interchanging distinct and definite signals between:

(a) the **winding engine driver** and the bank;

(b) the **winding engine driver** and every established intermediate landing station below the bank; and

(c) the **winding engine driver** and a point not more than 40 metres from the bottom of the **shaft**. When this point is more than 15 metres from the bottom of the **shaft**, some efficient signalling arrangements shall also be provided and used for signalling from the bottom of the **shaft** to this point.

8.13.75 Every vertical **shaft** in the course of being sunk shall be provided with two separate means for each **winding plant** whereby persons employed in the sinking process can signal effectively from the bottom of the **shaft** and from any depth in the **shaft** to the **winding engine driver** and there shall also be provided in respect of each **winding plant** an efficient signalling arrangement for interchanging distinct and definite signals between the **winding engine driver** and the bank and between the **winding engine driver** and every established intermediate landing station below the bank.

8.13.76 At every **shaft** and **winze**, other than a **shaft** or **winze** in the course of being sunk, where persons are regularly conveyed and where the signalling arrangements are operated by electricity, the following provisions, except as provided for in other signals approved in writing by the Principal Inspector of Mines, shall be observed in respect of each **winding plant** used for the raising or lowering of persons.

8.13.76.1 There shall be provided and maintained in good working order, two separate, independent, and efficient signalling arrangements, hereinafter referred to as the locked-bell system and the call-bell system, which shall be used for transmitting signals.

8.13.76.2 The locked-bell system shall be for the interchange of signals between:

(a) the **winding engine driver** and the bank; and

(b) the **winding engine driver** and every established point below the bank from which winding is normally carried on, but it shall not enable the **banksman** to signal on this system to anyone but the **winding engine driver**.

8.13.76.3 The system shall be arranged so that the **winding engine driver** can easily distinguish between signals received from the bank and signals from below the bank and such a system has been approved by the responsible engineer.

8.13.76.4 The system shall further be arranged and maintained so as to prevent as far as possible, signals being given by unauthorized persons. The signal operating mechanism at the bank and at all points below the bank shall be securely enclosed in a metal casing of substantial construction and shall be kept locked when not in actual use. The key shall be removable and when not required shall be removed and retained by the **banksman**, **onsetter** or an authorised person. Without the key inserted, the bell system will be inoperable. Other locking arrangements may be used if approved by the Principal Inspector of Mines.

8.13.76.5 There shall be in use a device which automatically prevents the conveyance or conveyances being raised or lowered after the **winding engine driver** has given a signal on the circuit of the locked-bell system provided for interchanging signals with the bank or on the circuit of the locked-bell system provided for interchanging signals with the established points below the bank from which winding is normally conducted, until he has received a signal on each of the circuits on which he gave a signal.

8.13.76.6 The call-bell system shall enable signals to be transmitted:

(a) to the **winding engine driver** from the bank; and

(b) to the **winding engine driver** from every established point below the bank from which winding is normally conducted and shall also enable signals to be interchanged between the bank and every established point below the bank from which winding is normally conducted, but it shall not enable the **winding engine driver** to transmit signals on this system.

8.13.76.7 The signal operating mechanism of the call-bell system shall be accessible to any person to transmit the signal '10 followed by station signal' and 'one long ring' referred to in the standard code of signals, but it shall not be used for any other purpose, provided that the **banksman** or **onsetter** or any person duly authorised by the manager may use the system to indicate the station at which the conveyance is required and subject to the approval of the Principal Inspector of Mines to transmit special signals.

8.13.76.8 The tone of the bells of the call-bell system shall be such as to be easily distinguishable from that of the bells of the locked-bell system.

8.13.76.9 In a **shaft** or **winze** where efficient telephonic intercommunication is provided between the bank and every established landing station for persons below the bank, it shall be necessary to provide only one call-bell system in respect of all the winding plants serving such **shaft** or **winze**.

8.13.77.1 The standard code of signals or an abridged form thereof approved by the Principal Inspector of Mines, as well as any other approved signals that may be in use on a mine, shall be displayed suitably in the form of distinctly legible notices in letters and figures not less than 10 millimetres in height. The decision whether such notices are suitably displayed and distinctly legible shall rest with the Principal Inspector of Mines.

8.13.77.2 Such notices shall be posted up in the winding-engine room, at the bank and at all **shaft** or **winze** stations for the time being in use and easily readable by the operator of the signals.

8.13.78 The employer must take reasonably practicable measures to ensure that a winder used for the conveyance of persons is equipped with a device that will continuously record the signals exchanged between the **winding engine driver** and **banksman** and the **winding engine driver** and **onsetter**, and that the information recorded is kept readily available at the mine for a period of at least 30 days.

8.13.79 Any person acting in conflict with the code of signals referred to in these regulations or of any special signals used on a mine shall be guilty of an offence.

Requirements at shafts and winzes

8.13.80 Every vertical **shaft** and every vertical **winze** exceeding 30 metres in depth and used for winding purposes shall be provided with guides for skips, cages or other conveyances unless exempted in writing by the Principal Inspector of Mines.

8.13.81 At any place in a **shaft** or **winze** where it is necessary for workmen to pass from one side to the other, provision shall be made for them to do so without entering or crossing a compartment in which winding is taking place; such passage shall be securely fenced off from moving parts of machinery and from any conveyance.

8.13.82 No person shall enter or cross a compartment of a **shaft**, **winze** or of a headgear in which winding is taking place, except for the purpose of entering, leaving or having access to a cage, skip or other conveyance or for the purpose of conducting an examination, effecting repairs or doing other necessary work in such compartment.

8.13.83 No winding operations shall be conducted in a **shaft**, **winze** or headgear while persons are engaged in effecting repairs, conducting an examination or doing other work in such **shaft**, **winze** or headgear except:

8.13.83.1 where such winding operations are necessary for the purpose of effecting the repairs, conducting the examination or doing other work; or

8.13.83.2 where persons engaged in effecting the repairs, conducting the examination or doing other work are adequately protected from the conveyances and other winding equipment used in such winding operations as well as from falling stones and falling **material**.

8.13.83.3 any such repairs or maintenance or inspections contemplated in these regulations shall be recorded in the applicable Winder Engine Driver's Logbook affected by such activities, and such Winder Engine Driver's Logbooks are kept for a period of at least 12 months and readily available.

8.13.84 No person shall effect repairs, conduct an examination or do other work in a **shaft**, **winze** or a headgear while winding operations are being conducted in such **shaft** or headgear, except:

8.13.84.1 where such a person is adequately protected from the conveyances and from other winding equipment as well as from falling stones and falling **material**; or

8.13.84.2 where the winding operations are necessary for such person to effect the repairs, conduct the examination or to do other work.

8.13.85 The person in immediate charge of any inspection, repair, examination, maintenance or work in a winding compartment of a **shaft**, **winze** or a headgear or in immediate charge of any work in connection with maintenance or installation of equipment in a winding compartment of a **shaft**, **winze** or a headgear shall:

a) make an entry into the Winding Engine Driver's Logbook and such entry must be countersigned by the **winding engine driver** on duty. Such entry must be cleared by the person that made such entry and must be countersigned by the same person on duty, immediately after completion of such activities.

b) where it is not practicable for the person in charge to make an entry during an inspection, repair, examination, maintenance or work into the Winding Engine Driver's Logbook, the **winding engine driver** may make such an entry on behalf of the person in charge of such inspection, repair, examination, maintenance or work. Such entry must be cleared by the person in charge thereof and must be countersigned by the **winding engine driver** on duty, immediately after completion of such activities.

c) where it is not practicable for the person in charge to clear an entry after an inspection, repair, examination, maintenance, or work made into the Winding Engine Driver's Logbook, the engineer or person appointed by the manager may clear such an entry on behalf of the person that made the entry if they are satisfied that it is safe to do so. If the engineer or a person appointed by the manager cannot clear the entry in person, the engineer or the person appointed by the manager in question may give permission for it to be done; and

d) where it is not practicable for the person in charge to make and clear an entry before and after an inspection, repair, examination, maintenance, or work made into Winding Engine Driver's Logbook, the person in charge must notify the **winding engine driver** to make an entry in the logbook for him/her before and after the inspection, repair, examination, maintenance, or work conducted. Such entry must be cleared by the person in charge of such activities immediately after completion of such activities and must be countersigned by the **winding engine driver** on duty.

8.13.86 Where winding is conducted in a **shaft** or **winze** there shall be fitted above the bank spring keeps or jack catches or some other effective contrivance to support any conveyance detached from the winding rope because of an overwind: Provided that this requirement does not apply to a vertical **shaft** or **winze** in the course of being sunk.

8.13.87 For a winding system in a vertical **shaft** or **winze** where the end of the winding rope is fastened to the drum of the winding engine, there shall be fitted detaching hooks to detach from the winding rope any conveyance overwound in the headgear and to support it. Such detaching hooks shall be additional to the devices required in a **shaft** or **winze**, provided that detaching hooks need not be fitted to the ropes of any **winding plant** in a vertical **shaft** or **winze** in the course of being sunk.

8.13.88 For a winding system in a vertical **shaft** or **winze** where the winding rope is not fastened to the drum or sheave of the winding engine:

8.13.88.1 The over-run space in the headgear above the highest established stopping place shall be provided with rigid guides or other appliances arranged so that an overwound conveyance is retarded to minimise the risk of the conveyance coming into contact with the rope sheave or the buffer stops in the headgear; and

8.13.88.2 The over-run space at the bottom of the **shaft** or **winze** below the lowest established stopping place shall be provided with rigid guides or other appliances arranged so that an overwound conveyance is retarded and arrested before it can come into contact with any fixed obstacle.

8.13.89 The headgear shall be carried sufficiently high to allow a clearance space that must be equal to or greater than the combined height of the conveyance in use, in which the conveyance can travel above or beyond the highest landing place for persons before it comes into contact with any fixed obstacle excluding any retarding appliance. This regulation will not apply to skips used for rock winding.

8.13.90 The **shaft** or **winze** shall be carried sufficiently deep to allow an over-run space that must be equal to or greater than the combined height of the conveyance in use, in which the conveyance can travel below or beyond the lowest landing for persons before it comes into contact with any fixed obstacle excluding any retarding appliance, provided that such over-run space need not be provided in a **shaft** or **winze** in the course of being sunk.

8.13.91.1 The employer must, for every **station level**:

(a) identify and clearly demarcate an area surrounding the **shaft** as the **shaft station**;
(b) show the **shaft station**, including the location of all safety devices on the **shaft station**, on a plan; and
(c) prominently and conspicuously display a copy of such plan at every **shaft station**.

8.13.91.2 The employer must install a device or combination of devices that prevent inadvertent access of vehicles to the **shaft** as close as practicable to all entrances to the **shaft**.

8.13.91.3 The device or combination of devices must be:

(a) fail-safe or lockable.
(b) equipped with mechanisms that prevent their unauthorised operation;
(c) operated only under the direct supervision of a competent person appointed by the engineer or by the person appointed by the manager;
(d) operated only if a conveyance is being used for the loading or unloading of equipment, **material**, minerals or **explosives** at that entrance to the **shaft**; and
(e) operated only in closed positions if a conveyance is being used for the loading or unloading of persons at that entrance to the **shaft**.

8.13.91.4 The employer must install a station stop block device or combination of devices which ensure that any self-propelled mobile machine or combination of vehicles entering the **shaft** inadvertently.

8.13.91.5 The employer must ensure that procedures are in place, or that the device or combination of devices are equipped with mechanisms that prevent the unauthorised operation or removal of such device or combination of devices.

8.13.91.6 The engineer or person appointed by the manager must approve any access configuration and must with regard to the device or combination of devices used for the purposes of these regulations:

(a) approve the design of every such device; and

(b) ensure that every such device is installed and maintained in good working order.

8.13.92 No self-propelled mobile machine may be parked in the **shaft station**.

8.13.93 A self-propelled mobile machine may only enter the **shaft station** under power if it is under the direct supervision of a competent person appointed by the engineer or the person appointed by the manager.

Requirements for loading of winding plant conveyances

8.13.94 No person shall travel in a conveyance operated by a winding engine if such conveyance is loaded or partially loaded with minerals, and no person shall travel in a conveyance operated by a winding engine that is being used simultaneously for the winding of minerals, provided that, if authorised by the manager or a person appointed by the manager , persons engaged in sinking operations in a vertical **shaft** or **winze** may descend such **shaft** or **winze** in a conveyance operated by a winding engine that is being used simultaneously for the raising of mineral.

8.13.95 No person shall travel-

a) with **material** or **explosives** in a conveyance operated by a winding engine; and

b) in a conveyance operated by a winding engine that is being used simultaneously for the winding of **material** or **explosives**.

8.13.96 Subject to the provisions of the regulation dealing with authorization for persons to travel with **material** in the conveyance:

(a) the manager, engineer or a person appointed by the manager may grant permission in writing for persons to travel with **material** if such **material** is not likely to endanger persons travelling in the conveyance; and

(b) the manager shall:

(i). cause a list to be kept of the **material** which is regularly conveyed in the **shaft** or **winze** for which permission has been granted in terms of paragraph (a);

(ii). ensure that all persons authorised to give signals for the raising and lowering of persons are conversant with the **material** mentioned in the list;

(iii). make a copy of the list readily available to all persons concerned; and

(iv). ensure that all persons authorized to carry such **material** must carry such suitable bag or enclosure to be approved by the engineer in charge.

8.13.97 The manager, engineer or a person appointed by the manager may authorise the following persons to travel in a **shaft** or **winze** with **material** or **explosives** prohibited in terms of these regulations if such travelling is necessary for the efficient carrying out of their duties:

8.13.97.1 Onsetters and their gangs;

8.13.97.2 Persons engaged in sinking operations or in conducting an examination, effecting repairs or doing other work in the **shaft** or **winze**; and

8.13.97.3 Persons required to ensure the safe passage through the **shaft** or **winze** of **material** which cannot be conveyed inside a conveyance.

8.13.98 No person shall place **explosives** in or remove them from a conveyance operated by a winding engine except under the immediate supervision of the **banksman**, **onsetter** or a competent person authorised thereto by the manager, or a person appointed by the manager.

8.13.99 No person shall ride in any **shaft** or **winze** on the roof, top, side, bow, rim, bridle or frame of or in any position outside a conveyance operated by a winding engine, except for persons engaged in examining or repairing the **shaft** or **winze** or doing other work in the **shaft** or **winze** may ride on the roof of such conveyance or on a special platform if authorised to do so by the manager or mine overseer and if such riding on the roof of such conveyance or on the special platform is necessary for the efficient carrying out of such examination, repairs or other work.

8.13.100 Persons shall not be raised or lowered in a conveyance attached to the normal conveyance except when permitted in writing by the Principal Inspector of Mines.

8.13.101 No bucket or other means of conveyance that can sway shall be allowed to leave the top or bottom of the **shaft** or **winze** unless the workman in charge thereof has steadied it or caused it to be steadied.

8.13.102 No bucket or other means of conveyance shall be filled with loose rock or ground above the level of the brim.

8.13.103 Tools or other **material** which project above the top of the cage, skip, bucket, kibble or other means of conveyance, and which are raised or lowered in a **shaft** or **winze** shall be fastened securely in such a manner that the operation of any arresting device or detaching hook is not affected.

Notices required at winding plants

8.13.104 Where a **winding plant** is used the following shall be kept posted up:

8.13.104.1 At each winding engine:

a) a copy of the **prescribed permit** issued in terms of **the Act**;

b) the code of signals and any special signals;

c) a copy of a notice shall be placed regarding persons not to speak to or distract the attention of the person operating a winding engine while it is in motion; and

d) a copy of a notice shall be placed regarding a person operating a winding engine while it is in motion not to be involved in distracting or be distracted by any person.

8.13.104.2 At each bank, station or landing platform:

(a) a notice showing clearly the maximum number of persons permitted to ride in each conveyance, or a notice prohibiting the conveyance of persons where it is not allowed in terms of the **prescribed permit** issued under **the Act**;

(b) the code of signals and any special signals;

(c) a notice showing clearly the use of full body safety harness to be used when working near open shafts gates; and

(d) a notice showing items that are prohibited to be carried or taken into the underground workings.

Requirements for Winding-engine drivers

8.13.105 Nobody shall **drive** or be caused to **drive** or permitted to **drive** a **winding plant**, for which a **prescribed permit** has been issued unless he is a certificated **winding engine driver**, provided that a learner **winding engine driver** may drive such a **winding plant** under the direct supervision of a certificated **winding engine driver** while no persons are being conveyed.

8.13.106 Upon engaging a **winding engine driver**, who is required in terms of this regulation to be the holder of a certificate, the manager shall record or cause to be recorded the number and type of such certificate, provided that if such **winding engine driver** has not driven a winding engine for the preceding two years or more, the manager shall not engage him, but shall require such winding-engine driver to undergo a medical examination with a full psychometric evaluation , refresher training and re-examined in accordance with these regulations.

8.13.107 No person shall speak to or, in any way, distract the attention of the person operating a winding engine while it is in motion, except an authorised person required to conduct such activities in the winding engine.

8.13.108 The driver of a winding engine:

8.13.108.1 shall not start his engine before he has received a distinct and proper signal to do so, unless he has been instructed in writing to do so by the manager, or by a person appointed by the manager , as the case may be, or unless he has received the 'clear signal' 2 pause 2, or unless he has sole control of the cage, skip or other means of conveyance;

8.13.108.2 shall not act on any signal if he has been unable to do so within one minute after receiving it but shall request a repeat signal: by ringing 2 pause 2 pause 2 pause 2, provided that after having received the 'clear signal' he may move at his discretion, but when a period of more than five minutes has lapsed after he has received such 'clear signal' he shall move the conveyance slowly;

8.13.108.3 shall not run such engine at a greater speed than that fixed by the Principal Inspector of Mines;

8.13.108.4 shall, except in the case of emergency, avoid shocks in starting, in running and in stopping the said engine;

8.13.108.5 shall apply correctly every device and means at his or her disposal to prevent the conveyance over-running:

(a) the signalled destination; or

(b) when the destination is not signalled, the highest or lowest landing place when persons are being conveyed and the highest or lowest established stopping place when persons are not being conveyed to an extent which may endanger the safety of persons or may cause damage to the winding equipment.

8.13.108.6 shall apply correctly every device and means at his disposal to prevent the conveyance moving in a direction opposite to that signalled;

8.13.108.7 shall not start the engine until the expiry of at least 10 seconds after receiving a signal to raise or lower persons, provided that this requirement shall not apply when blasting is about to take place in a **shaft** or **winze** in the course of being sunk;

8.13.108.8 shall not act in response to any signal on the call-bell system other than the one long ring referred to in these regulations.

8.13.108.9 shall not unclutch a drum of the engine until the driver has assured themselves immediately beforehand by testing the brake of the drum against sufficient holding power of the engine, that the brake is in proper condition to hold the load suspended from said drum;

8.13.108.10 shall when such engine is fitted with a friction clutch, test the holding power of the clutch after engaging the clutch and before releasing the brake of the corresponding drum. For a steam engine or an air engine the test shall be made against the full power of the engine, and for an electric engine against the normal starting current, while the brake of the other drum is kept off;

8.13.108.11 shall not perform clutching operations whilst persons are in either of the conveyances operated by his or her engine, provided;

a) clutching may be performed on a sinking platform while the minimum number of persons are on the platform to ensure that the clutching operations are correctly conducted; and

b) clutching may be performed on an equipped **shaft** in case of emergency under the instructions of an engineer after said engineer has satisfied themselves that it is safe to do so.

8.13.108.12 shall not, unless he intends operating the winding engine on single drum during shaft examination, shaft repairs or shaft sinking operations, give the signal that clutching operations are completed until he has engaged the clutch and has securely locked it and where applicable has carried out the test prescribed in these regulations.

8.13.108.13 shall not work or be permitted to work a shift on the winding engine longer than 10 hours, except where permission has been obtained from the Principal Inspector of Mines and under such conditions directed by the Principal Inspector of Mines;

8.13.108.14 shall take all reasonable measures to safeguard persons being conveyed and to avoid any unnecessary delays in conveying such persons.

8.13.108.15 shall take a 20 minute drivers break as near in the middle of the shift as possible. Provided where a Principal Inspector of Mines has granted permission for working longer than the prescribed 10 hours shift, the driver's break interval shall be increased by 10 minutes for each additional hour permitted.

8.13.108.16 shall take breaks at intervals specified in the mine operating shaft schedule.

Banksmen and Onsetters

8.13.109 No unauthorised person shall give any signal other than an accident signal or shall in any manner whatsoever interfere with the signalling arrangement provided for winding operations.

8.13.110 No person shall be permitted to carry out the duties of a **banksman** or **onsetter** unless he is the holder of an onsetter's certificate issued in accordance with these regulations. Every appointment of a **banksman** or **onsetter** shall be made in writing by the manager.

8.13.111 If upon engaging a **bankman** or an **onsetter**, who is required in terms of this regulation to be the holder of a certificate and such a **bankman** or **onsetter** has not performed such appointed duties for the preceding two years or more, the manager shall not engage such **banksman** or **onsetter**, but shall require such **banksman** or **onsetter** to undergo a medical examination, refresher training and a proficiency examination conducted by an appointed engineer or his delegate.

8.13.112.1 No person, other than the **banksman** or **onsetter** on duty, shall give or shall be caused or permitted to give any signals for the raising or lowering of persons provided that:

(a) when the **banksman** or **onsetter** is not available, a competent person to whom the manager has given written permission to do so may give signals for the conveyance of himself and of any person travelling with them;

(b) the ganger or miner in charge at the bottom of a **shaft** or **winze** in the course of being sunk or a person acting under their immediate supervision may give a signal to raise persons; and

(c) any person duly authorised in writing by the manager or mine overseer may give signal for the conveyance of persons between the main mineral loading station at the bottom of a vertical or inclined **shaft** and the lowest landing station for persons.

The Principal Inspector of Mines shall be furnished on demand with a list of the persons to whom permission has been granted in terms of paragraph (a) above and may order its revision.

8.13.112.2 No person other than the **banksman** or **onsetter** on duty shall give any signal for the raising or lowering of **material** or mineral unless duly authorised by the manager or mine overseer or engineer. Where the **winding plant** is also used for the conveyance of persons, such authorisation shall be in writing.

8.13.113 No person shall be appointed as a **banksman** or **onsetter**, nor shall any person be authorised to give signals, unless such person has sufficient knowledge of the shaft operations and of the signals to be given in connection with such operations.

8.13.114 The **banksman**, **onsetter** or other person authorised to give signals for winding operations:

8.13.114.1 shall not, after the **winding engine driver** has signalled that persons may enter the conveyance for the purpose of travelling or that persons in the conveyance may continue to travel, give any signal on the signalling arrangements for that winding compartment until all persons are properly placed in the conveyance and the doors or gates of the conveyance and the gates or barriers at the bank, station or landing platform are properly shut, provided that when the **banksman**, **onsetter** or other person authorised to give signals intends to travel, such doors, gates or barriers as will prevent his entrance to the conveyance may be left open until he or she has given the signal to raise or lower and has entered the conveyance;

8.13.114.2 shall not, when the conveyance containing persons is brought to rest in the proper position at the bank, station or landing platform and the **winding engine driver** has signalled that persons may leave the conveyance, give any signal on the signalling arrangements for that winding compartment until all persons who are to leave the conveyance are out and clear of it, Provided that in the event of an accident to **shaft** or person the 1 long ring and signal (10) is allowed to be given.

8.13.114.3 shall ensure that the roof, cover or hood, required to be provided in terms of these regulations, is properly in position before persons are raised or lowered in or on such conveyance.

8.13.114.4 shall take all reasonable measures to prevent persons from having unauthorised access to the conveyance and to the winding compartments;

8.13.114.5 shall not allow any person to travel in a conveyance operated by a winding engine if such conveyance contains minerals and, except as provided for in these regulations, shall not allow any person to travel in a conveyance operated by a winding engine that is being used simultaneously for the winding of minerals;

8.13.114.6 shall not, except as provided for in these regulations, allow any person to travel in a conveyance operated by a winding engine that is being used simultaneously for the winding of **material**;

8.13.114.7 shall not, except as provided for in these regulations, allow any person to ride on the roof, top, side, bow, rim, bridle or frame of or in any position outside a conveyance operated by a winding engine;

8.13.114.8 shall acquaint himself with the maximum number of persons authorised by the Principal Inspector of Mines to travel at any one time in the cage and on each deck of the cage, or in the skip or other means of conveyance and shall not allow such maximum to be exceeded;

8.13.114.9 shall not allow any unauthorised person to give signals on the signalling arrangements used in connection with winding operations;

8.13.114.10 shall not give the 'clear signal' 2 pause 2 or any signal to raise or lower the conveyance unless all persons at the bank, station, landing platform, loading box or other place where he is in charge, are in a position in which they will not be endangered by the movement of such conveyance or any other conveyance operated by the same winding engine;

8.13.114.11 shall not give a signal to clutch unless all persons are out of and clear of the conveyance or conveyances operated by the winding engine;

8.13.114.12 shall not cause or permit any person to enter or to have access to the conveyance or conveyances until he or she has received a signal from the **winding engine driver** that clutching operations are completed; and

8.13.114.13 shall take all reasonable measures to safeguard against accidents to all persons at the place where he is in charge, whether such persons are under his direct supervision or not.

Winding plant record and Logbooks

8.13.115 The manager must take reasonably practicable measures to ensure that a **recoverable recordable system** is established and maintained at the mine for the winding system and shaft system and in which the following information is captured:

8.13.115.1 details of all maintenance, repairs, testing, inspections and examinations of the winding system and shaft system and of the findings, which must be captured by the competent person who undertook the maintenance, repairs, inspections or examinations within 24 hours from completion of such maintenance, repairs, inspections or examinations;

8.13.115.2 all rope manufacturing and modification details, as well as dates of installation, modifications and removal for each winding rope, which must be captured by the competent person within 24 hours after installation, and which information must include at least the following:

(a) Name of manufacturer;
(b) Date of manufacture;
(c) Coil number;
(d) Length in metres;
(e) Mass per metre in kilograms;
(f) Diameter in millimetres, Width and thickness in millimetres;
(g) Construction of rope:
  (i). type and length of lay;
  (ii). number of strands;
  (iii). class of heart;
  (iv). type of lubricant;
(h) Construction of strands:
  (i). number of wires;
  (ii). diameter of wires in millimetres;

(iii). Class of core;

(iv). Class of steel in wires (galvanised or not);

(v). Tensile strength of steel in Megapascals;

(vi). Breaking force in kilo Newtons;

(vii). Rope test certificate number and place of test;

(i) whether used for winding or balance purposes:

(i). Name and type of **shaft**;

(ii). Name of compartment;

(iii). Winding plant licence (certificate) number.

8.13.115.3 All dates of installation, modification and removal of the winding rope **attachments**, which must be captured by the competent person within 24 hours after installation, modification or removal, as the case may be;

8.13.115.4 The current condition of the winder and signalling arrangements, which must be captured by the competent person (**winding engine driver**) before commencing their shift or before taking over from another **winding engine driver**; and

8.13.115.5 Any unsafe conditions or events that occur during the full period of control of a winder, which must be captured by the competent person (**winding engine driver**) upon occurrence of such event.

8.13.116 The manager must take reasonably practicable measures to ensure that the persons appointed:

8.13.116.1 scrutinise all entries made in the **recoverable recordable system** within 7 days of entry;

8.13.116.2 determine any required measures to be taken;

8.13.116.3 ensure that such measures are implemented;

8.13.116.4 record all the activities required by this regulation in the **recoverable recordable system**; and

8.13.116.5 if the system is electronic, it must be approved by the Principal Inspector of Mines, before it is put to use.

8.13.123 No person shall ride in any **shaft** or **winze** on the roof, top, side, bow, rim, bridle or frame of or in any position outside a conveyance operated by a winding engine, nevertheless persons engaged in examining or repairing the **shaft** or **winze** or doing other work in the **shaft** or **winze** may ride on the roof of such conveyance or on a special platform if authorised to do so by the manager or mine overseer and if such riding on the roof of such conveyance or on the special platform is necessary for the efficient carrying out of such examination, repairs or other work.

8.13.124 Persons shall not, except when permitted in writing by the Principal Inspector of Mines, be raised or lowered in a conveyance attached to the normal conveyance.

8.13.125 No bucket or other means of conveyance that can sway shall be allowed to leave the top or bottom of the **shaft** or **winze** unless the workman in charge thereof has steadied it or caused it to be steadied.

8.13.126 No bucket or other means of conveyance shall be filled with loose rock or ground above the level of the brim.

8.13.127 Tools or other **material** which project above the top of the cage, skip, bucket, kibble or other means of conveyance, and which are raised or lowered in a **shaft** or **winze** shall be fastened securely in such a manner that the operation of any arresting device is not affected.

Care must be exercised in cases where a detaching hook is attached to the end of the winding rope that the **material** does not project above the detaching hook or interfere with it in any way whatsoever.

Trial run of winding plant

8.13.128 When winding in any compartment or compartments of a **shaft**, **winze** or headgear has been stopped for repairs or blasting operations or when it has been stopped for any other purpose for a period exceeding one hour in duration or when a conveyance has been changed, the winding engine serving such compartment or compartments shall not be used for the raising or lowering of persons until the cage, skip or other means of conveyance has been run at least one complete trip up and down such compartment or compartments, provided that this regulation shall not apply to the use of the winding engine for the raising or lowering of persons conducting an examination or effecting repairs; and provided further that where such stoppage is confined to a portion of any compartment or compartments, the requirements of this regulation shall only apply to such portion.

Requirements for the examination of winding plant and shaft

8.13.129 The manager or subordinate manager and an appointed engineer or appointed competent person, as the case may be shall, in respect of his area of responsibility, appoint in writing competent persons whose duty it shall be to examine carefully, to an extent to be clearly defined in their respective letters of appointment, at least once in each week, at intervals not exceeding 10 days, the guides or rails and the shaft compartments and equipment, including the doors, gates and barriers and ancillary equipment at stations, loading platforms and loading boxes.

8.13.130 An appointed engineer or appointed competent person, shall appoint in writing, competent person or persons whose duty it shall be to examine carefully:

8.13.130.1 at least once in each day the winding ropes, the balance ropes or tail ropes, the connection of the winding ropes to the drum, the connections referred to in these, the conveyances and the main members by which they are suspended and any safety catches attached thereto, the pulley wheels or sheaves, the brakes, the depth indicators, the safety devices and all external parts of the winding equipment upon the proper working of which the safety of persons depends, provided that these examinations will not be necessary on any day mentioned in section 9(1) of the Mines and Works Act if the **winding plant** makes less than 50 **winding cycles** during such day;

8.13.130.2 at least once in each day during the changeover of loading activities, conduct a thorough examination of the safety devices, dolly wheels and the **attachments** thereto for a **winding plant** or conveyance that is responsible for the conveyance of persons and minerals;

8.13.130.3 at least once in each day after a daily examination, artisans responsible for such winder examinations, to do a full trip trial run, inside the conveyances to verify and record that the winding conveyance is in a good state of use by other persons; and

8.13.130.4 at least once in each week the signalling arrangements and the safety devices used in connection therewith.

8.13.131 An appointed engineer or an appointed competent person, shall examine carefully:

8.13.131.1 at least once in each week, and at intervals not exceeding 10 days, the overspeed and overwind prevention devices and the external parts of the winding engine;

8.13.131.2 at least once in each week, and at intervals not exceeding 14 days, the integral structures joining the shaft infrastructure and the conveyor belt installations;

8.13.131.3 at least once in each year the winding engine as to the condition of the internal mechanical parts and, as far as reasonably practicable, the internal electrical parts;

8.13.131.4 at least once in each calendar month at intervals not exceeding 45 days, the structure of the winding rope and the balance rope or tail rope, with the aim ascertaining the amount of deterioration thereof. For the purpose of this examination the rope shall be cleaned at a place selected by the person making the examination who shall note any reduction in the circumference of the rope, any variation in the length of the rope, the superficial condition of the wires as to wear, corrosion, fractures and brittleness, and all other data necessary for ascertaining the amount, extent, and distribution of the deterioration of the rope. If the examination discloses features such as undue or rapid wear or fractures of the wires, which, although not constituting sufficient reason for condemning the rope, call for more than usual attention, the examination required under this paragraph shall be made more frequently;

8.13.131.5 at least once in each calendar month at intervals not exceeding 45 days the connections between the winding rope and the drum, the connections referred to in these regulations and the sheave wheel or wheels;

8.13.131.6 after every accident or occurrence referred to in a chapter of the regulations and before winding operations are resumed, all portions of the winding equipment affected by such accident or occurrence on which the safety of persons depends; and

8.13.131.7 by dynamically testing the automatic overwind and overspeed prevention devices at least once in every six months, at intervals not exceeding 200 days.

8.13.132 In the case of connections referred to in these regulations being of a class of steel approved by the Chief Inspector of Mines, such connections and their component parts shall be dismantled, cleaned and then examined by an appointed engineer or an appointed competent person, at intervals not exceeding 12 months.

8.13.133 If on any examination required in terms of these regulations there is discovered any weakness or defect which may endanger the safety of persons, and such weakness or defect cannot be remedied immediately, the person making the discovery shall report such weakness or defect to the manager without delay. Until such weakness or defect is remedied, the **winding plant** shall not be used except in so far as may be necessary to remedy such weakness or defect.

Access to conveyance

8.13.134 No person shall enter the conveyance at the bottom of the **shaft** until the conveyance has been raised and lowered or until some other distinct signal has been received from the **winding engine driver**.

8.13.135 The **banksman** or **onsetter** shall not allow any person to enter the conveyance decking platform at any level until the conveyance is stationary and secured at that level or until some distinct signal has been received from the **winding engine driver** by the **onsetter** or **banksman** to indicate that it is safe to do so.

8.13.136 The person in charge of blasting operations shall notify the **winding engine driver** by a special signal, namely five knocks or rings, when blasting is about to take place, and, except in the case of firing by electricity, the driver shall reply by raising or lowering the conveyance approximately two metres.

Small winding plants

8.13.137 The **prescribed permit** shall not be required for a **winding plant** that is driven by an engine or motor developing not more than 250 kilowatts, provided that such **winding plant**:

a) is not used for the raising or lowering of persons other than persons engaged in repairing or examining a **shaft**; and

b) does not operate in any portion of a **shaft** or **winze** in any manner likely to interfere with the conveyance operated in that **shaft** served by a **winding plant** for which a **prescribed permit** has been granted.

8.13.138.1 A small **winding plant**, referred to in these regulations, shall not be subject to the provisions of the other winding regulations: Provided that the manager, or the appointed subordinate manager shall appoint in writing any competent person to carry out the duties and examinations prescribed in these regulations and provided further that the engineer, or the appointed subordinate engineer shall appoint in writing any competent person to examine at least once each week the item specified in these regulations.

8.13.138.2 Notwithstanding the provisions of these regulations, a record book or card index system may be provided in place of the machinery record book.

8.13.138.3 Notwithstanding the provisions of these regulations, a winding rope may not be used for a **winding plant** contemplated in these regulations unless:

a) its breaking strength, determined by a test on a representative sample as prescribed in these regulations, is at least 10 times the **attached load**; and
b) that part of the winding rope attached to the conveyance or counterweight is cut off and re-terminated at intervals not exceeding six months.

8.13.139 The engineer or appointed subordinate engineer shall satisfy himself that any person who is not a certificated **winding engine driver**, and who shall drive a small winding engine not permitted for the conveyance of persons is competent to do so.