



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

**RULES AND SYLLABI FOR WINDING-ENGINE-DRIVERS
CERTIFICATE FOR MINES AND WORKS FRAMED UNDER
MINERALS ACT REGULATION 28.6 IN FORCE IN TERMS OF
SCHEDULE 4 OF THE MINE HEALTH AND SAFETY ACT
(ACT 29 OF 1996)**

A handwritten signature in black ink, appearing to read 'DJ Janse van Rensburg'.

DJ Janse van Rensburg
Chairman: Commission of Examiners
Winding Engine Drivers

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Revision B

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ACRONYMS.

WED	Winding Engine Driver
MQA	Mine Qualification Authority
SAQA	South African Qualification Authority

1. **Examination venue.**

The examinations shall be held at the **Department of Mineral Resources Travenna Campus, Arcadia Pretoria 0007** at such time and places as the Chairman of the Commission may decide. The examination shall be conducted both orally and in writing.

The examination will be arranged to take place twice a month. At least six candidates are required to warrant an examination per sitting.

2. **Training venue.**

Candidates must be trained by a **Mining Qualifications Authority (MQA) Accredited Training Centre**. Such training centre must have access to shafts and winders on mines.

3. **Application to be accepted as a candidate.**

Any person who wishes to be considered as a candidate shall make application to The Secretary, WED's Commission, **Private Bag X59, Arcadia Pretoria 0007, tel. No. 012 444 3504 or E-mail Lettie.pienaar@dmr.gov.za** on the prescribed form (obtainable free from the secretary) with proof of payment of R50 rand as per DMR 73 form **prior to commencement of training.**

The completed application form together with-

- (a) a certified copy not older than three months of the applicant's ID document. The candidate must be **19 years** of age the day he/she sits for examination,
- (b) evidence of his/ her sobriety and good conduct, the evidence must include the starting and end date of training towards a winding-engine driver,
- (c) In possession of a DMR Onsetter Certificate or "Onsetter Skills Program" issued by the MQA which includes a statement of results.
- (d) In possession of a National Senior Certificate, immaterial of the subjects obtained, or a schedule of results (which is not older than 12 months from date of issue).

- (e) In possession of a Grade 11 qualification with Maths and Science. A schedule of results will be acceptable.
- (f) Foreign qualifications need to be evaluated by the South African Qualifications Authority (SAQA) Tel 012 431 5000 in Hatfield Pretoria. Address obtainable from the internet.
- (g) In possession of a valid medical certificate obtained from an **Accredited Medical Practitioner that does eyes (including colour blindness), ears and lungs, (X-ray) tests in a Hospital / Clinic** to work as a winding engine driver.
- (h) Where the surname of a candidate changed between the schooling qualification and application to be accepted due to marriage, a certified copy not older than three months of the marriage certificate is required.

The commission will issue a letter to the candidate confirming that s/he has been accepted to be trained provided that all documentation are certified and not older than three months.

4. Application for examination.

Any person who wishes to be considered for examination **shall apply at least one month prior to the examination** to The Secretary, WED's Commission, **Private Bag X59, Pretoria 0007, tel. No. 012 444 3504 or E-mail Lettie.pienaar@dmr.gov.za** on the prescribed form (obtainable free from the secretary) with proof of payment of R50 rand as per attached system. This will include the following:-

- a) a medical certificate that has not expired, and
- b) proof of having complied with the training and experience prescribes in the Minerals Act and Regulations 28.6.1 in force in terms schedule 4 of the Mine Health and Safety Act (Act no 29 of 1996) (Training Logbook)

The commission will issue a letter confirming that s/he has been accepted as a candidate to sit for the examination.

When such candidate has passed the examination s/he needs to submit a certified copy of his or her ID document that is not older than three months to the commission before being issued with a certificate.

5. Examination requirements.

- a) A winding engine driver's certificate shall not be issued unless the Commission is satisfied that neither the sight nor hearing of the candidate is defective, that s/he is not subject to any other infirmity, mental or physical, likely to interfere with the efficient execution of his/her duties.
- b) The commission shall determine that, within the scope indicated in the syllabus, the candidate possesses sufficient knowledge of the working of winders, winding operations, or other machinery and ancillary equipment used in or in connection with winding, and portions of the Mine Health and Safety Act (Act no 29 of 1996) and Regulations.

6 Examination criteria.

- a) Candidates will be examined on the following subjects:-
 - Legal Knowledge
 - Practical
 - Mechanical and
 - Electrical
- (b) A qualified Winding Engine Driver that has not driven for a period of two years and up to five years must be retested on legal knowledge and practical subjects. More than five years will be tested on all four subjects with proof of clutching on a winder witnessed by an engineer.
- (b) A record of service from the previous employer shall be required as evidence.

A letter from a Contractor is not satisfactory.

- (g) A Winding-Engine driver who has passed the Re-Examination is required to produce his original certificate, valid medical certificate and ID at the examination board before a letter of approval that the certificate is valid again will be issued to such a Winding-Engine Driver.
- (h) A qualified Winding Engine Driver whose certificate has been withdrawn due to medical reasons (irrespective of the time lapsed) will be treated as a new candidate after been declared medical fit.

7. Syllabus.

7.1 Legal knowledge.

The following sections of the Mine Health and Safety Act (Act no 29 of 1996) and **Mine Health and Safety Act Regulations** as well as **Minerals Act Regulations** in force in terms of schedule 4 of the Mine Health and Safety Act (Act no. 29 of 1996) are applicable:

- a) Sections of the Mine Health and Safety Act 1996 for examination purposes

Section 10 (1)(a) and (b)
 Section 11 up to (1)(d) and (5)(a)
 Section 13(2)(c)
 Section 17(1)
 Section 22
 Section 23(1)(a), (1)(b) and (2)(c)
 Section 26(c)

- b) Informative sections of the Mine Health and Safety Act 1996

Section 10, 11, 13, 17, 22, 23, 25, 26, 48, 50, 54, 55, 56, 64, 83, 85

- c) Mine Health and Safety Act Regulations for examination purposes

Chapter 8
 Chapter 9
 Chapter 10.

- Chapter 11
 Chapter 13
 Chapter 16
 Chapter 23
 Regulation 1 a, b, c, d and
 Regulation 4 (h) from i to xii
 d) Minerals Act Regulations applicable for examination purposes

Chapter 1

The definitions of “banksman”, “onsetter”, “material,”
 “winding plant” , “shafts” and “competent person”

The definition of a ‘Winding- Engine Driver”

Chapter 3

Regulation 3.1,3.2,3.5,3.6,3.8,3.9,3.11,3.12,3.13,and
 3.14.

Chapter 4 Regulation 4.7

Chapter 7 Regulation 7.7.1

Chapter 10 Regulations

Chapter 15
 Regulations 15.1,

Chapter 16
 All regulations excluding 16.35, 16.36, 16.37,
 16.39,16.40, 16.97.2, up to 16.123.2

Chapter 21
 Regulations 21.5, 21.6 and 21.7

Chapter 28
 Chapter 29 Regulation 29.2.

7.2 Special instructions.

- Changing of conveyances on a dual winder system from rock to men and vice versa.
- The electrical and mechanical changes during such conveyance change.
- Hoisting men or rock on incline shafts.
- Slinging material in vertical shafts.
- Slinging of abnormal loads.
- Operating single drum AC or DC winders
- Operating a double drum winder with one drum unclutched.
- Lowering conveyance with dynamic braking on AC winders.
- Lowering conveyance with reverse power on AC winders.
- Knowledge of multi rope winders
- Shaft Examination procedures and methods

7.3 Clutching.

- a) Brake test.
- b) End of wind trips.
- c) Clutching in a vertical shaft.
- d) Raising and lowering trailers in one compartment.
- e) Raising and lowering trailers simultaneously.
- f) Clutching for material, mineral and for shift.
- g) Clutch status indication.

7.4 Shaft examination and repairs.

- a) Difference between vertical and incline shafts.
- b) Communication systems, including logbooks.
- c) Pre-arrangements for examinations
- d) Verbal and written instructions.
- e) Code of Practice (Mine Specific)
- f) Pre-Arrangements

7.5 Contingency plans.

- a) Derailment in incline shaft (AC or DC winders).
- b) Power failure in incline shaft (AC or DC) winders.
- c) Accident to shaft signals received.
- d) Control lever stuck in open position.
- e) Brake failure.
- f) Brakes slipping.
- g) Long or short reach rod snapping whilst loading men.
- h) Accident to persons whilst conveying explosives.
- i) Bad coiling.
- j) Jamming of conveyance.

7.6 Shaft sinking.

- a) Tipping of kibbles.
- b) The general operations pertaining to sinking shafts.
- c) Transporting men, materials, minerals and explosives.
- d) Operation of stage.
- e) Logbooks.
- f) Signalling systems
- g) Cross-head alarm
- h) Bank door interlock

7.7 Rope examination.

- a) Daily examination (visual).
- b) Monthly examination.
- c) Quarterly Electro magnetic induction tests.
- d) Deceleration tests.

7.8 Ropes.

Procedures for-

- a) Cutting of ropes, front or back-ends.
- b) Changing of ropes.
- c) New marks.

7.9 Taking marks.

- a) Taking marks from another driver before taking over.

- b) Task list, which make up the job of a winding engine driver,
- c) Checking the winder and equipment.
- d) General operation of a winder.
- e) Operating an automatic winder.
- F Operating a winder when hoisting men.
- g) Operating a winder when transporting material.
- h) Operating a winder slinging long material.
- i) Clutching a winder.
- j) Operating a winder when hoisting rock.
- k) Operating a winder during shaft examination, vertical shaft.
- l) Operating a winder in a sinking shaft.
- m) Operating a single drum winder.
- n) Lowering a single drum on a double drum winder.
- o) Obtaining new marks.
- p) Changing conveyances.
- q) Rope examination.
- r) Replacing ropes.
- s) Cutting ropes front ends.
- t) Long and short ropes
- u) Starting and stopping an auxiliary compressor when air supply fails.
- v) Shifts with an onsetter.

8. **Dynamic test.**

Legal requirements to do a six monthly (end of wind) dynamic test to determine the degree of protection.

9. **Slack and tight rope monitoring systems.**

Candidates must be trained in slack and tight rope monitoring systems.

10. **Limited scope certificates.**

A limited scope certificate is issued to a Winding-Engine Driver that is required to drive a specific type of winder with a limited certificate:

The engineer on the mine where the candidate is trained must ensure that a letter with a breakdown of the equipment in use on the winder or winders accompany the application for examination.

This certificate is valid only for mines that they are issued for. When such Winding-Engine Driver leaves that mine, the mine must **return** such **limited scope certificate** to the Department where it was issued for **cancellation**.

NB: - The *employer* must take *reasonably practicable* measures to ensure that a learner winding engine driver only operates a *winder* while they are under the direct supervision of a winding engine driver and then does so in accordance with the official training procedure issued by the Mining Qualifications Authority.

Important issues.

- a) Accredited Training Centres not complying with points 3 & 4 will forfeit their candidate's privilege to be examined and no exemption will be granted.

- b) Training providers must ensure that learners are familiar with the Special Instructions in item 7.2
- c) Training providers must ensure that medical practitioners are aware of item 5 (a) before issuing medical certificates of fitness.

DJ JANSE VAN RENSBURG
CHAIRMAN COMMISSION OF EXAMINERS
DATE: 03-04-2013