



WORLD CLASS MINERALS AND ENERGY SECTORS THROUGH SUSTAINABLE DEVELOPMENT



DEPARTMENT OF MINERALS AND ENERGY



the dme

Department:
Minerals and Energy
REPUBLIC OF SOUTH AFRICA

General Machinery

Risks

- any person coming into contact with any moving part of such machinery or any equipment attached thereto;
- the machinery being installed, moved, maintained or repaired in a manner that poses a significant risk to persons;
- coming into contact with fluids from any pneumatic or hydraulic systems under pressure.



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Measures to prevent:

The employer must take reasonably practicable measures to prevent persons from being injured because of any machinery failing as a result of:

- (a) incorrect design;
- (b) incorrect installation;
- (c) poor maintenance; or
- (d) incorrect use or non-compliance with proper operating or safety procedures.



Measures to be taken:

- only persons authorized by the employer to do so, start and operate any machine where such starting or operation may pose a significant risk to any person;
- where the moving of machinery may pose a significant risk to any person, such machinery is only moved under the constant supervision of a competent person who is fully aware of the risks attached to such moving of the machinery;
- only persons authorised by the employer to do so enter any area where machinery is operated, where such operation may pose a significant risk to any person;
- machinery is only operated if all installed safety devices are operational and functional;
- persons in close proximity to moving parts of machinery do not wear or are not permitted to wear clothing or anything else that can be caught in such moving parts;

Measures to be taken (cont)

- where the unexpected moving of any machinery or any part of any machinery could pose a significant risk to any person, appropriate pre-start warning devices, such as audible the delay time to be determined by risk assessment with a minimum of ten second time delay, are fitted to such machinery and used to warn persons that such machinery is about to be set in motion
- where there could be a significant risk to any person working on any machinery due to the release from such machine of any mechanical, electrical, hydraulic, chemical or other source of energy, a written lock-out procedure is prepared and implemented to ensure that such source of energy is effectively locked out and de-energised before any person works on such machinery;
- access scaffolding is erected, used, maintained and dismantled safely and in accordance with SANS Standard 10085-1:2004 “The design, erection, use and inspection of access scaffolding”.

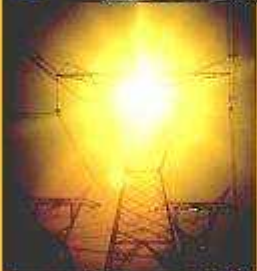


Measures to be taken (cont)

- means are provided, on or in close proximity to any machine, to immediately remove the source of power to that machine in case of an emergency;
- Where the starting of machines are interlocked, no unintended starting of any of those machines can take place;
- starting devices are so arranged that no accidental starting of machinery can take place;
- all electrical, pneumatic and hydraulic portable equipment are operated and maintained in a safe working order;



- Measures to prevent any person from coming into contact with any moving part of machinery or equipment attached thereto must include:
 - effective physical barriers at the machinery such as screening, guarding or fencing; or
 - failsafe electric or electronic barriers interlocked with the machinery in such a way that the machinery would be stopped before persons come into contact with moving machinery or parts thereof; or
 - effective barriers at a safe distance away from any machinery



Reasonable measures include for:

Diesel engines

- when a compression ignition engine system is found to have any defect which may cause a significant risk to the safety or health of persons, the use of such engine system is discontinued immediately;
- all services, maintenance and repairs to diesel-powered equipment are performed by a competent person;
- all areas where diesel fuel is stored and where fueling is carried out are clearly marked and that measures are in place to prevent spillage, contamination and fire, including that –
 - diesel engine fuel is delivered underground in such a way that no spillage takes place during delivery;
 - when fuel is piped underground fuel delivery pipes are drained each time after use;
- fuel is stored underground only in non-flammable robust containers which do not leak; and
- the quantity of fuel stored underground is limited to 3 day's estimated consumption.





Diesel engines (cont)

The employer must take reasonably practicable measures to ensure that every mobile diesel engine powered unit, when not in use, is kept at a location that is sufficiently ventilated to prevent a build up of diesel fumes in the air at that location sufficient to cause a significant risk when starting up that engine.

The employer must take reasonably practicable measures to ensure that all areas where diesel fuel is stored are clearly indicated on the mine's rescue plan contemplated in regulation 17 (19).