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

REGULATIONS RELATING TO MACHINERY & EQUIPMENT

I **BP, SONJICA** Minister of Minerals and Energy under section 98 (1) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), after consultation with the *Council*, hereby make the regulations in the Schedule.

BP SONJICA MINISTER OF MINERALS AND ENERGY

SCHEDULE

CHAPTER 8

MACHINERY & EQUIPMENT

General Machinery Regulations

- 8.8(1) The employer must take reasonably practicable measures to prevent persons from being injured as a result of them, the clothes being worn by them or any equipment being held by them coming into contact with or being drawn into any moving part of any machine.
- 8.8(2) 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.
- 8.8(3) The measures to be taken by the employer in terms of regulation 1 must include measures to ensure that-
 - (a) only persons authorized by the employer to do so, start operate and maintain any machine where such starting, operation or maintenance may pose a significant risk to any person;
 - (b) 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;

- (c) 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;
- (d) machinery is only operated if all installed safety devices are operational and functional;
- (e) 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;
- (f) where the unexpected moving of any machinery or any part of any machinery could pose a significant risk to any person, appropriate prestart warning devices, such as audible warning devices, the delay time must be determined by risk assessment with a minimum of a ten second time delay, are fitted to such machinery and used to wam persons that such machinery is about to be set in motion;
- (g) here 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 lockout 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;
- (h) 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".
- 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;
- (j) where the starting of machines are interlocked, no unintended starting of any of those machines can take place;
- (k) starting devices are so arranged that no accidental starting of machinery can take place; and
- (I) all electrical, pneumatic and hydraulic portable equipment are operated and maintained in a safe working order;
- 8.8(4) The measures to be taken by the employer to prevent any person from coming into contact with any moving part of machinery or any equipment attached thereto, must include-
 - (a) effective physical barriers at the machinery such as screening, guarding or fencing; or
 - (b) 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
 - (c) effective barriers at a safe distance away from any machinery.
- 8.8(5) The employer must take reasonably practicable measures to ensure that:
 - (a) 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;
 - (b) all services, maintenance and repairs to diesel-powered equipment are performed by a competent person;
 - (c) all areas where diesel fuel is stored and where fuelling is carried out are clearly marked and that measures are in place to prevent spillage, contamination and fire, including that –

- (i) diesel engine fuel is delivered underground in such a way that no spillage takes place during delivery;
- (ii) when fuel is piped underground fuel delivery pipes are drained each time after use;
- (iii) fuel is stored underground only in non-flammable robust containers which do not leak; and
- (iv) the quantity of fuel stored underground is limited to 3 (three) day's estimated consumption.
- 8.8(6) 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.
- 8.8(7) 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).

Conveyor Belt

Definitions

For purposes of regulation 8.9, unless the context otherwise indicates -

"conveyor belt installation" means a mechanical system used for the transportation of minerals, material, or persons on a belt.

"power supply" means any energy source feeding the drive motor of a *conveyor* belt installation

- 8.9(1) In compliance with regulation 8.8(1) the employer must ensure that -
 - (a) a *conveyer belt installation* is not cleaned when any of its parts are in motion;
 - (b) the *power supply* of a stationary *conveyer belt installation* is lockedout during repairs, maintenance, routine cleaning and cleaning of spillage;
 - (c) the driving machinery of the *conveyor belt installation* can be stopped by any person from any point, along its length where access to the belt is possible;
 - (d) the driving machinery of the *conveyor belt installation* is stopped should the belt break, jam or slip excessively;
 - (e) persons are prevented from entering any side of a *conveyer belt* installation where there is no walk way, unless means has been provided to do so safely;
 - (f) one or more devices are fitted and used to give all persons at any point where access to the *conveyer* belt *installation* is possible sufficient prior warning for a period to be determined by the mines risk assessment with a minimum period of 10 seconds that any part of such a *conveyer belt installation* is about to be put into motion;
 - (g) the take up or belt tensioning device will not move during repairs, routine cleaning, cleaning of spillage, maintenance or belt splicing;
 - (h) where two or more *conveyor belt installations* are used in series, sequence interlocking is provided which automatically will-

- (aa) stop all *conveyor belt installations* feeding a belt conveyor that has stopped; and
- (bb) prevent a conveyor belt from starting until the conveyor belt onto which it feeds is moving;
- (i) only persons authorised to do so by the employer operate, maintain, clean and repair a *conveyor belt installation*;
- (j) the belt of any *conveyor belt installation* cannot run away; and
- (k) the overall structural design of every *conveyor belt installation* is approved by a competent person.
- 8.9(3) The employer must take reasonably practicable measures to prevent persons from being injured by material or mineral falling from a *conveyor belt installation*, which measures must include the fitting and use of one or more devices to prevent run-back or run-on; when such *conveyor belt installation* is stopped;
- 8.9(4) The employer must take reasonably practicable measures to prevent persons from being exposed to flames, fumes or smoke arising from a *conveyor belt installation* catching fire, including instituting measures to prevent, detect and combat such fires.
- 8.9(5) The employer must take reasonably practicable measures to prevent persons from being injured as a result of the breaking, misalignment or damage of a conveyor belting due to any mineral, material or coal dust accumulating on or around the moving parts of any *conveyor belt installation*.
- 8.9(6) The employer must take reasonably practicable measures to prevent persons at or near *conveyor belt installations* from being injured due to lightning directly or indirectly striking the installation.
- 8.9(7) The employer must take reasonably practicable measures to ensure that the use, operation and inspection of man-riding conveyors comply with SANS 10266: 2006 Edition 1 "The safe use, operation and inspection of man-riding belt conveyors in mines".
- 8.9(8) The normative references in SANS 10266: 2006 are not applicable to the employer.
- 8.9(9) The employer must take reasonable measures to ensure that the functionality of the devices contemplated in regulation 8.9(1)(f) and (g) and of any other safety devices relating to the *conveyor belt installation* are tested weekly.
- 8.9(10) The employer must ensure that a written procedure is prepared and implemented for conveyor belt splicing, joining and repairing and for the safe use of chemicals during such splicing, joining and repairing.