

DEPARTMENT OF LABOUR

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OCCUPATIONAL HEALTH AND SAFETY ACT, ACT 85 of 1993

GUIDELINES FOR DRIVEN MACHINERY REGULATIONS, 2015

Rev 0

FOREWORD

This document consists of explanatory notes on the implications and application of the more important regulations concerning Driven Machinery Regulations. The notes are meant to help and guide suppliers, contractors, service providers , competent persons and users of driven machinery.

INTRODUCTION

The Driven Machinery Regulations were published on 24 June 2015 in Government Gazette No.38905 with the aim of protecting employees against the dangers associated with the use of Driven Machinery.

The aim of these guidance notes is to explain in simple language the provisions of the Driven Machinery Regulations and to stress the principle of self-regulation.

SCHEDULE

Definitions

1. In these Regulations, "the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), and any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned, and, unless the context otherwise indicates —

"bench saw" means a circular saw working in a bench (including a rack-bench) for the purpose of ripping, deep cutting or cross cutting, but does not include a swing-saw or other saw that is moved towards the wood;

Notes:

(a) None

"block and tackle" means a lifting device consisting of one or more pulley blocks reeved with fibre ropes, used solely for the raising and lowering of a load or for moving it horizontally, but does not include chain blocks, lever hoists or steel- wire rope pullers;

Notes:

(a) It should be there for clarity to identify the difference between block and tackle, chain hoist and lever hoist because chain blocks and lever hoist were regarded as block and tackle in the old regulation.

"calender rolls" means a series of counter-rotating rollers at the end of a rolling process;

Notes:

(a) These rolls are used in steel paper mills, printing industry as well as food industry.

"capstan-type hoist" means a rotating machine used to control or to apply force to move or raise loads by traction on a rope or cable;

Notes:

(a) This machine is used generally in fishing industry, harbours as well as pull rolling stock(railway vehicles).

"competent person" means a person who has the knowledge, training, experience and qualifications specific to the work performed: provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995, those qualifications and that training shall be deemed to be the required qualifications and training;

Notes:

- (a) None

"hand-powered lifting device" means a lifting device consisting of one or more sheave components reeved with chains, steel rope or fibre ropes, used solely for the raising and lowering of a load or for moving it horizontally and includes chain blocks, lever hoists, hand chain hoists, steel-wire rope pullers and winches, but does not include hand-powered hydraulic lifting devices;

Notes:

- (a) This definition was introduced to differentiate between lifting machine and hand powered lifting device.
- (b) Hand powered hydraulic lifting devices are amongst others hydraulic jacks.

"lifting machine" means a power-driven machine that is designed and constructed for the purpose of raising or lowering a load or moving it in suspension, but does not include an elevator, escalator or hand-powered lifting device;

Notes:

- (a) The definition listed the exclusions.
Power-driven machine means that a machine is powered by any energy source excluding manpower.

"lift truck" means a mobile lifting machine, but does not include —

- (a) a vehicle designed solely for the purpose of lifting or towing another vehicle;
- (b) a mobile earth-moving machine; or
- (c) a vehicle designed solely for the removal of a waste bin;

Notes:

- (a) This machine is generally known as forklift.

"lifting machinery entity" means a legal entity approved and registered by the chief inspector in terms of regulation 19;

Notes:

- (a) These are commonly known as LME

"lifting machinery inspector" means a person who is employed by a Lifting Machinery Entity and who is registered by the Engineering Council of South Africa in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

Notes:

- (a) These are commonly known as LMI and are registered at ECSA on behalf of Department of Labour.

"lifting tackle" means chain slings, wire rope slings, woven webbing slings, master links, hooks, shackles and swivels, eye bolts, lifting or spreader beams, tongs, ladles, coil lifters, plate lifting clamps and drum lifting clamps used to attach a load to a lifting machine;

Notes:

- (a) Coil lifters is found at steel industry for lifting hot rolled steel products.

"load path" means all the parts of the lifting machine under stress during the lifting operation;

Notes:

- (a) None

"man-cage" means a platform enclosed on all sides, whether closed or open at the top, designed for the purpose of raising and lowering persons by means of a lifting machine, but does not include mobile elevated work platforms and suspended access platforms;

Notes:

- (a) None

"point of operation" means that place in a machine where material is positioned and where the actual work is performed;

Notes:

- (a) None

"press" means a driven machine that shears, punches, forms or assembles metal or other material by means of cutting, shaping or combination dies attached to slides having a controlled reciprocating motion, but does not include bending brake presses, hot bending or hot metal presses, forging hammers and riveting machines or similar types of fastener applicators;

Notes:

- (a) None

"safe working load" means the mass load applicable to a piece of equipment or system as determined by a competent person taking into account the environment and operating conditions;

Notes:

- (a) The rigger must determine the Safe working load based on the condition at the time of lifting.

"thorough examination" means examination or inspection to determine whether the equipment is safe to use;

Notes:

- (a) None

"training provider" means a training provider for lifting machinery operators approved and registered by the chief inspector in terms of regulation 20;

Notes:

- (a) None

"transportation plant" means apparatus used for the transportation of material by means of an elevated conveyance suspended from and travelling along a catenary rope or chain where persons may pass or work below the path of the conveyance, or any such apparatus used for the transportation of persons.

Notes:

- (a) None

Scope of application

2. These Regulations shall apply to the design, manufacture, operation, repair, modification, maintenance, inspection, testing and commissioning of driven machinery.

Notes:

- (a) The aim of this regulation is to ensure the safety of operators, maintenance providers as well as inspection and testing providers operate safely.
- (b) The aim is to ensure that all driven machineries are safe for use.

Revolving machinery

3. Unless moving or revolving components of machinery are in such a position or of such construction that they are as safe as they would be if they were securely fenced or guarded, the user shall cause —

- (a) every shaft, pulley, wheel, gear, sprocket, coupling, collar, clutch, friction drum or similar object to be securely fenced or guarded;
- (b) every set screw, key or bolt on revolving shafts, couplings, collars, friction drums, clutches, wheels, pulleys, gears and the like to be countersunk, enclosed or otherwise guarded;

- (c) every square projecting shaft or spindle end and every other shaft or spindle end that projects for more than a quarter of its diameter to be guarded by a cap or shroud;
- (d) every driving belt, rope or chain to be guarded; and
- (e) the underside of every overhead driving belt, rope or chain above passages or workplaces to be so guarded as to prevent a broken belt, rope or chain from falling and so injuring persons: provided that the provisions of this paragraph shall not apply where, in the opinion of an inspector, no danger exists in the case of light belts owing to the nature thereof and the speed of operation.

Notes:

- (a) None

Circular saws

4. (1) No user may require or permit any person to operate a power-driven circular saw —
- (a) at a speed in excess of the manufacturer's rated maximum speed for the saw blade; or
 - (b) the saw blade of which is damaged in any way or that is dull or not regular or not correctly sharpened and set.
- (2) The user of a power-driven bench saw shall cause —
- (a) the saw blade to be effectively guarded below the table; and
 - (b) the part of the saw blade above the table to be covered by a substantial guard that shall cover the saw at all times to at least the depth of the teeth and that shall automatically adjust itself to the thickness of and remain in contact with the material being cut: provided that where such a guard is impracticable, the top of the saw shall be covered by a strong manually-adjustable guard that shall be adjusted to extend downwards to a point as near as practicable to the cutting point of the saw: provided further that in the case of a breakdown saw, the guard shall effectively cover the top of the saw blade.
- (3) The user shall cause every power-driven circular saw that is used for ripping wood to be provided with a riving knife, which shall —
- (a) be placed as close as practicable to the saw blade, but not more than 12 mm behind it, and in a direct line with the saw teeth at the level of the bench table;

- (b) have the edge nearest the saw in the form of an arc of a circle that shall have a radius not exceeding the radius of the largest saw blade that can be used on the bench by more than 3 mm;
 - (c) extend to a height above the table to within 5 mm of the top of the saw blade; and
 - (d) have a smooth surface and be strong, rigid and easily adjustable.
- (4) The user shall cause every tilting saw or tilting table saw to be so arranged that the adjustment of the riving knife and the guard remains effective with any position of the saw or table.
- (5) The user shall —
 - (a) cause a suitable push stick to be kept available at every bench saw that is fed by hand, to enable work to be carried out without danger to persons;
 - (b) provide suitable mechanical means for holding rough timber that is to be slabbed on a bench saw; and
 - (c) provide an effective guard for the automatic feed rollers of every bench saw equipped with such rollers.
- (6) The user shall cause every swing or radial saw that is moved towards the material —
 - (a) to be guarded so that only the cutting portion of the saw blade is exposed;
 - (b) to be arranged in such a manner that the saw will automatically move away from the cutting position when it is released; and
 - (c) to be fitted with a device that will oppose the thrust or tendency of the saw to pick up the timber or to throw the timber back at the operator when such saw is used for ripping timber.
- (7) The user of a portable power-driven circular saw shall provide —
 - (a) a fixed guard above the slide or shoe, which shall cover the saw blade to at least the depth of the teeth; and
 - (b) a guard that shall automatically cover the portion of the saw blade below the slide or shoe while sawing is not actually being done.

Notes:

- (a) None

Band saws and band knives

5. The user shall —

- (a) cause all moving parts, except the working portion of the blade at the point of operation, of every band saw or band knife to be effectively guarded; and
- (b) ensure that the machine is operated by a person trained for that particular machine.

Notes:

- (a) None

Wood-planing machines

6. (1) The user shall cause every wood-planing machine that is used for overhand planing and that is not mechanically fed, to be fitted with a cylindrical cutter block.
- (2) The user shall cause every planing machine used for overhand planing to be provided with a bridge guard that is capable of covering the full length and breadth of the cutting slot in the table and that can be adjusted easily in a vertical and horizontal direction.
- (3) No user may require or permit any planing machine that is not mechanically fed to be used for the overhand planing of any piece of wood that is less than 300 mm long, unless a safe holder is used for such a piece of wood: provided that this subregulation shall not apply to the planing of the edges of flat pieces of wood.
- (4) The user shall provide an effective guard for the feed-roller of every planing machine used for thicknessing, except in the case of a combined machine for overhand planing and thicknessing.

Notes:

- (a) None

Wood-moulding and mortising machines

7. (1) Having regard to the nature of the work that is performed, the user shall cause the cutter or chain of every wood-moulding or mortising machine to be effectively guarded.

- (2) If work cannot be performed when the cutter of a moulding machine is guarded, the user shall cause the wood being moulded to be held in a jig or holder that is so constructed that it will ensure safe working of the machine: provided that where a jig or holder cannot be used, the user shall provide a suitable spike or push stick and shall require persons who operate the machine to use such spike or push stick when necessary.

Notes:

- (a) None

Sanding machines

8. The user shall cause every —

- (a) drum sanding-machine to be provided with effective guards so arranged as to completely enclose the revolving drum except such portion as is necessary for the performance of the work;
- (b) disc sanding-machine to be provided with suitable guards that shall completely enclose the periphery and back of the sanding disc and that portion of the working face of the disc under the table; and
- (c) belt sanding-machine to be provided with guards at the trap points where the sanding belt runs onto its pulleys and cause any section of the belt not used for sanding to be effectively enclosed.

Notes:

- (a) None

Grinding machines

9. (1) The user of a power-driven grinding machine shall cause such machine to be marked in a conspicuous place with the manufacturer's rated speed or speeds of the spindle in revolutions per minute.
- (2) No user may require or permit a grinding wheel of a power-driven grinding machine to be operated at a speed exceeding that stipulated by the manufacturer of such wheel: provided that a grinding wheel larger than 100 mm in diameter shall only be used if the recommended operating speeds therefor are distinctly marked on such machine.

- (3) The user shall cause every grinding wheel of a power-driven grinding machine to be mounted concentrically on the spindle by means of robust metal flanges with annular peripheral bearing surfaces of adequate breadth, which shall bear upon the wheel, and a layer of suitable compressible material to be fitted between the flanges and the wheel: provided that grinding wheels for specialized application that cannot be fixed by flanges shall be so secured that displacement or rupture of the wheel in motion is eliminated as far as possible.
- (4) Having regard to the nature of the work that is performed, the user shall cause every power-driven grinding machine to be provided with a substantial guard, which shall enclose the grinding wheel as far as practicable and shall be of sufficient strength to withstand the force of impact of a rupturing wheel.
- (5) Having regard to the nature of the work that is performed, the user shall cause a power-driven grinding machine where the work piece is applied to the wheel by hand, to be provided with a substantial adjustable work rest, which shall be securely fixed in position and adjusted to within 3 mm from the grinding face of the wheel.
- (6) The user shall cause every power-driven grinding machine to be provided with a strong transparent shield, which shall be kept adjusted so as to protect the operator's eyes: provided that such shield may be omitted if every operator of the machine is personally issued with suitable eye protection and is obliged to wear it.
- (7) The user shall cause a notice to be posted in a conspicuous place at every power-driven grinding machine prohibiting persons from carrying out, inspecting or observing grinding work without using suitable eye protection.
- (8) The user shall ensure that the operators of machinery used for the purpose of grinding, cutting, fettling, polishing or similar applications are specifically trained for that particular machinery.

Notes:

- (a) This regulation does not apply to portable electrical grinders.
- (b) In house training for operators of grinding machines is acceptable provided that there is proof thereof.

Shears, guillotines and presses

10. (1) Where the opening at the point of operation of shears, a guillotine or a press is greater than 10 mm, the user shall cause such machine to be provided with —

- (a) a fixed guard that prevents hands or fingers reaching through, over, under or around the guard into the point of operation;
- (b) a self-adjusting guard that automatically adjusts itself to the thickness of the material being worked and that prevents hands or fingers reaching through, over, under or around the guard into the point of operation;
- (c) a manually or automatically operated moving guard that completely encloses the point of operation of such machine, is so arranged that the working stroke cannot be commenced unless the guard is closed, and cannot be opened unless the ram or blade is stationary;
- (d) an automatic sweep-away or push-away that pushes any part of the operator's body out of the danger zone when the working stroke commences; or
- (e) an electronic presence-sensing device that prevents or arrests a working stroke if it senses that any part of a person's body or any other foreign object is in the danger zone:

provided that any guarding provided in terms of this subregulation shall not in itself create any threat to the safety of persons.

(2) The user may use or permit the use of shears, a guillotine or a press without the guarding referred to in subregulation (1) if the operating controls to set it in motion require the simultaneous engagement of both hands of all the operators involved in the operation of the machine, and those operating controls —

- (a) are situated at such distance from the point of operation that none of the operators has enough time to reach the danger zone with any part of their body before the working stroke is completed; or
- (b) are so designed that the working stroke will be arrested if any one of the operators removes one of their hands from the controls:

provided that the operating controls shall be so arranged that they cannot be bypassed.

- (3) A user shall cause any full-revolution clutch shear, guillotine or press that is fed by hand to be provided with an anti-repeat device that incorporates a control system designed to limit the press to a single stroke every time even if the control that is actuating the press is held in the operating position, and that requires the actuating controls to be returned to the neutral position before another stroke can be initiated.

Notes:

- (a) None

Slitting machines

11. (1) Having regard to the nature of the work that is performed, the user of a slitting machine shall cause –
- (a) the cutting edge of the disc cutter to be effectively guarded;
 - (b) fixed guarding or enclosures to prevent access to a slitting machine; and
 - (c) access points to be controlled by an interlocked safety device, which must prevent or arrest the motion of the machine when activated by unauthorised entry.

Notes:

- (a) None

Mixing, agitating and similar machines

12. (1) The user shall cause all dangerous moving parts of a mixing, agitating or similar machine to be placed beyond the reach of persons by means of doors, covers, guards or any other means.
- (2) The user shall, wherever practicable, cause every mixing, agitating or similar machine to be so arranged that it cannot be set in motion unless the doors, covers, guards or other means referred to in subregulation (1) are in position and that the machine will come to a stop if any one of them is opened, unlocked or removed, or if the dangerous moving parts of the machine are exposed for any reason whatsoever: provided that the provisions of this subregulation shall not apply to doors, covers or guards that are bolted in position or to an inspection hatch that is provided for controlling a process while the machine is in operation.

Notes:

- (a) None

Rolls and calender rolls

13. The user shall, where practicable, cause every power-driven machine consisting of calender rolls or incorporating two or more rolls rotating in opposite directions that are less than 75 mm apart and where the in-running side or nip of the rolls is within the reach of persons, to be guarded for the full length of such nip with —

- (a) a fixed guard; or
- (b) a trip bar, a cable or an electronic sensing device not more than 300 mm from the nip that will stop or reverse the rotation of the rolls if the bar or cable is touched or if the danger area is invaded by any foreign object:

provided that where it is not practicable to install any of the specified devices an inspector may require or permit any other means of protection at the intake of the rolls.

Notes:

- (a) Rotating rolls could cause serious injury to hands and or arms and in some instances death. The objective of the tripping devices consisting of tension cables or wires tripping rods and bars as well as micro switch and optical beams protecting devices installed in closed proximity to these pinch points to prevent injuries to the persons operating these machines.
- (b) To avoid injuries persons who are not trained should be made aware of the dangers and are not allowed to operate or use this machinery.
- (c) Tripping device means a device designed to stop the machine when a foreign object comes in close proximity with a pinch point.
- (d) Nip/Pinch point is that part of the machine which can cause injury if a person comes into contact.

Washing machines, centrifugal extractors, etc.

14. The user shall, wherever practicable, cause every power-driven washing machine, centrifugal extractor or similar machine of double cylinder construction in which the inner cylinder, drum or basket rotates, to be provided with a door or lid on the outer cylinder, so interlocked that —

- (a) the inner cylinder cannot be put into motion unless the door or lid is closed;
and
- (b) the door or lid cannot be opened unless the inner cylinder is stationary.

Notes:

- (a) This includes all industrial machines however domestic machines are also protected by a door interlocks.

Air compressors

- 15.** The user of a positive displacement-type air compressor that is not provided with automatic means for limiting the operating temperature to a safe level shall provide a fusible plug fitted close to the outlet valves or discharge ports of every stage of compression: provided that the provisions of this regulation shall not apply to air compressors with a free air delivery of less than 8,5 cubic metres per minute or in which compression does not take place in the presence of lubricating oil.

Notes:

- (a) Piston type air compressor are used in industry.

Refrigeration and air-conditioning installations

- 16.** No user may use or permit the use of a refrigeration or an air-conditioning installation unless it complies with a safety standard with respect to its construction, installation, operation and inspection incorporated for this purpose into these Regulations under section 44 of the Act.

Notes:

- (a) None

Transportation plants

17. (1) No user may use or permit the use of a transportation plant unless —
- (a) it complies with a safety standard with respect to the design, construction, installation, operation and inspection thereof incorporated for this purpose into these Regulations under section 44 of the Act; and
 - (b) the user is in possession of written authorization for the use thereof from an inspector.
- (2) Any person who wishes to use a transportation plant shall apply in writing to the head of the relevant provincial office of the Department of Labour for permission for such use and shall, together with such application, submit —
- (a) a complete set of design calculations and drawings of the proposed installation; and
 - (b) a certificate issued by a registered professional engineer certifying that they have checked the design of the installation and that such design will ensure the safe operation of the installation under all permitted loadings.
- (3) An inspector may, if they are satisfied that the provisions of this subregulation have been complied with and that the transportation plant may be safely used, grant permission in writing for the use thereof, subject to the conditions that they may determine.

Notes:

- (a) Anybody who wants to install a transportation plant must be in possession of a letter authorising him or her to install and operate the plant.
 - (b) Applications for permission to install and operate a transportation plant must be submitted to a DoL office in a province where a plant is installed.
- (4) An inspector may withdraw the permission granted in terms of subregulation (3) if they deem it necessary in the interests of safety.
- (5) The user shall cause the entire installation and all working parts of a transportation plant to be subjected to a thorough examination and a performance test, as prescribed by the standard to which the transportation plant was manufactured, by a person who has knowledge and experience of the erection and maintenance of

transportation plants or similar machinery and who shall determine the serviceability of the structures, ropes, machinery and safety devices before they are put into use and every time after they are erected, and thereafter at intervals not exceeding 12 months: provided that in the absence of such prescribed performance test the entire installation of the transportation plant shall be subjected to a load of 120% of the rated mass load, applied over the complete operation range of such plant and in such a manner that every part of the installation is stressed accordingly.

- (6) Notwithstanding the provisions of subregulation (5), the user shall cause every hoisting rope and every hook or other load-attaching device that forms part of the transportation plant to be thoroughly examined by a person referred to in subregulation (5) at intervals not exceeding six months.
- (7) The user shall cause the results of the examinations and tests prescribed by subregulations (5) and (6) to be entered and signed by the person carrying out such examinations and tests, in a record book that shall be kept on the premises at all times.

Lifting machines, hand-powered lifting devices and lifting tackle

18. (1) No user may use or permit the use of a lifting machine or hand-powered lifting device unless —
- (a) it has been designed and constructed in accordance with a generally accepted technical standard;
 - (b) it is conspicuously and clearly marked with the safe working load: provided that when such safe working load varies with the conditions of use of the manufacturer, a table showing the safe working load with regard to every variable condition shall be posted by the user in a conspicuous place easily visible to the operator;

Notes:

- (a) WLL is an international marking that is attached to the machine when it is purchased from the manufacturer (OEM).
- (b) WLL is part of the design specification.

- (c) The end user must determine the safe working load (SWL) as per the prevailing conditions .The operator should be able to see the plate as the intention of the subregulation is for the operator to see.
- (c) the manufacturer's identification plate displaying the name of the manufacturer, the design standard, the serial or reference number and the country of origin is affixed to such machine; and

Notes:

- (a) These requirements do not apply to machines that were in use prior to the publication of these regulations.
- (d) it has at all times at least three full turns of rope on the drum of each winch that forms part of such a machine when such winch has been run to its lowest limit, and that is controlled by an automatic cut-out device:

provided that paragraphs (b) and (d) above shall not apply to capstan-type hoists.

Notes:

- (a) An automatic cut out device is a built in safety device.
- (2) The user shall ensure that every power-driven lifting machine is fitted with a brake or other device capable of holding the safe working load should –
 - (a) the power supply or lifting effort fail;
 - (b) the load attachment point of the power-driven lifting machine reach its highest and lowest safe position; or
 - (c) the load condition be greater than the rated load condition of that machine.

Notes:

- (a) This requirement only applies to power driven lifting machines.
- (3) The user shall cause every chain or rope that forms part of the load path of a lifting machine or hand-powered lifting device to have the factor of safety prescribed by the standard to which that machine was manufactured: provided that in the absence of

such prescribed factor of safety, chains, steel-wire ropes and fibre ropes shall have a factor of safety of at least four, five and 10, respectively, with regard to the safe working load of that machine.

Notes:

- (a) The objective is to maintain the integrity of the load bearing capacity of the machine.
 - (b) When replacing the ropes and you know the safe working load of the machine then the factor of safety mentioned above must apply.
- (4) The user shall cause every hook or any other load-attaching device that forms part of the load path of a lifting machine or hand-powered lifting device to be so designed or proportioned that accidental disconnection of the load under working conditions cannot take place.

Notes:

- (a) We must not look at the hook only but consider the load path. It is about preventing disconnection. The use of disconnecting hooks or latches is not prescribed where the design is of such a nature that accidental disconnection cannot take place. It is the user's responsibility to ensure he or she states clearly what the purpose of the machine will be when purchasing the machine.
- (5) (a) The user shall cause the entire installation and all working parts of every lifting machine or hand-powered lifting device, as well as ancillary lifting equipment used with the machine or device, excluding lifting tackle, to be subjected to a thorough examination and a performance test, as prescribed by the standard to which the lifting machine was manufactured, by a lifting machinery inspector of a lifting machinery entity, which shall determine the serviceability of the structures, ropes, machinery and safety devices before they are put into use and every time they are dismantled and re-erected, and thereafter at intervals not exceeding 12 months: provided that, in the absence of a manufacturing standard or a standard incorporated under section 44(1) of the Act, the whole installation of the lifting machine shall be tested with 110% of the safe working load applied over the complete lifting range of such machine

and in such a manner that every part of the installation is stressed accordingly.

- (b) The lifting machinery inspector of the lifting machinery entity referred to in paragraph (a) must have knowledge of the erection, load-testing and maintenance of the type of lifting machine or similar machinery involved.
- (c) Notwithstanding paragraph (a), mobile cranes, self-erecting cranes and mobile elevated work platforms shall be excluded from the performance test after each re-deployment within the 12-month period referred to in that paragraph.

Notes:

(a) *The lifting machinery inspector must do inspection and test on behalf of the Lifting machinery Entity.*

(b) *Hand powered lifting devices do not have to be tested every time they are attached to an overhead structure.*

(c) Self erecting cranes includes self erecting tower cranes.

- (6) Notwithstanding subregulation (5), the user shall cause all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine or hand-powered lifting device to be subjected to a thorough examination by a competent person at intervals not exceeding six months.

Notes:

(a) The user of a block and tackle must ensure that it is examined prior to use.

(b) The user is free to use an in house competent person or an LME for six monthly thorough examination of a lifting machine or hand powered lifting device.

- (7) (a) Every user of a lifting machine or hand-powered lifting device shall at all times keep on their premises a register in which the user shall record or cause to be recorded full particulars of any performance test and examination referred to in subregulations (5) and (6) and any modification or repair to such lifting

machine or hand-powered lifting device, and shall ensure that the register is available on request for inspection by an inspector.

- (b) Every user of a leased lifting machine or hand-powered lifting device shall at all times keep on their premises a register in which the user shall have the latest applicable performance test and service records not older than 12 months.

Notes:

- (a) A user of a leased lifting machine or hand powered lifting device is a lessee of that machine?
- (b) The owner and the lessor of leased equipment shall keep and maintain full service history records on their premises for at least 10 years.
- (8) No user shall require or permit any person to be moved or supported by means of a lifting machine unless that machine is fitted with a man-cage designed and manufactured according to an approved SANS standard approved for that purpose by an inspector and after a risk assessment has been done.

Notes:

- (a) Man-cage was known as a cradle or suspended basket. The aim of this regulation is ensure that persons are lifted safely and work is done safely .The intention is to limit the use of a man-cage as far as possible. The employer must firstly consider lifting persons with machine/equipment specially designed to lift person (i.e. cherry picker) .In the event that a lifting machine other than the one designed to lift person i.e. forklift , crane can be used to lift person inside the Man-cages/cradles or suspended basket.
- (b) This use of an associated forklift or a crane with a man-cage must be also be approved for a specific site to lift person must be approved by an inspector.
- (c) The scope of such approval shall, as a minimum, include design and safe operation .
- (d) The use of cradles should in the first instance be avoided by the use of purpose made machinery.
- (e) In exceptional instances where the use of cradles cannot be avoided (occasionally) the user must apply for approval from Department of Labour.
- (f) Safe working procedure for these activities must be implemented and strictly enforced.
- (9) No user shall use or permit any person to use any power-driven lifting machine unless it is provided with —

- (a) in the case of a power-driven lifting machine with a lifting capacity of greater than 5000 kg, a load indicator capable of indicating to the operator of the machine the mass of the load being lifted: provided that such device shall not require manual adjustment, from the application of the load to the power-driven lifting machine until the release of that load, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting; and/or
- (b.) a load-limiting device that will automatically arrest the driving effort whenever the load being lifted is greater than the safe working load of the power-driven lifting machine at that particular radius, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting: provided that such device shall not arrest the driving effort when the power-driven lifting machine is being operated into a safer position:
provided that power-driven lifting machines manufactured or refurbished prior to the commencement of these Regulations shall be deemed to comply with these Regulations.

Notes:

- (a) *This requirement only applies to a power driven lifting machine with a capacity of 5000kg and greater*
 - (b) The intent is that a Load limiting device is compulsory for all power driven lifting machine.
 - (c) This requirement only applies to power driven lifting machines manufactured or refurbished after the 30 September 2015.
- (10) No user may use or allow the use of any lifting tackle unless —
- (a) every item of lifting tackle is well constructed of sound material, is strong enough, is free from defects and is constructed in accordance with a generally accepted technical standard;

- (b) every lifting assembly consisting of different items of lifting tackle is conspicuously and clearly marked with traceable identification particulars and the safe working load that it is designed to lift with safety;
- (c) the ropes, chains or woven webbing have a factor of safety with respect to the safe working load they are designed to lift; the safety factor being —
 - (i) 10 for natural-fibre ropes;
 - (ii) seven for man-made fibre ropes or woven webbing;
 - (iii) six for steel-wire ropes, except for double-part spliced endless sling legs and double-part endless grommet sling legs made from steel-wire rope, in which case the factor of safety shall be at least eight;
 - (iv) five for steel chains; and
 - (v) four for high-tensile or alloy steel chains:

provided that when the load is equally shared by two or more ropes or chains the factor of safety may be calculated in accordance with the sum of the breaking strengths taking into consideration the angle of loading;

- (d) all lifting tackle is inspected and discarded if such items show any sign of damage, defect, wear or distortion that would make them unsafe for use, as per manufacturer's specification; and
- (e) such lifting tackle is examined at intervals not exceeding three months by a competent person, appointed by the user in writing for this purpose, who shall record and sign results of such examination.

Notes:

- (a) Lifting tackles marked with a Working Load limit are also acceptable to be complying with requirements of this sub regulation.
- (b) In practice it is not always possible to ensure equal load sharing and persons performing this work must take into consideration the possible unequal loading in determining the capacity of the lifting tackle.

- (11) The user shall ensure that every lifting machine is operated by an operator specifically trained for that particular type of lifting machine: provided that in the case of a lifting machine listed in the National Code of Practice for Training Providers of

Lifting Machine Operators, the user shall not require or permit any person to operate such a lifting machine unless the operator is in possession of a certificate of training, issued by a training provider accredited by the Transport Seta approved for the purpose by the chief inspector.

Notes:

- (a) Certificate of training here refers to certificate of competence. Training providers in possession of a valid approval certificate signed by Chief Inspector are allowed to train operators of lifting machines listed on the National Code of Practice for Training Providers of Lifting Machine Operators.

Approval and registration of lifting machinery entity

- 19.(1) The chief inspector may approve any legal entity that has the competency and operational ability and that is involved in the examination and performance-testing of lifting machines, hand-powered lifting devices and ancillary lifting equipment used with the machine or devices.
- (2) An application for approval and registration as a lifting machinery entity shall be made to the chief inspector in the form of Annexure A.
- (3) The chief inspector shall furnish an approved lifting machinery entity with the appropriate certificate of registration and shall enter such registration into the national database.
- (4) An approved lifting machinery entity shall on request produce a certificate of registration to an inspector or to any person to whom it intends to render an examination or performance test.
- (5) An approved lifting machinery entity shall inform the chief inspector of any change affecting its approval and registration under these Regulations within 14 days of such change.

Notes:

- (a) None

Approval and registration of training providers

20. (1) The chief inspector may approve and register any training provider that has been accredited by the Transport Education and Training Authority as an approved training provider.
- (2) An application for approval and registration as a training provider must be made to the chief inspector in writing and must be accompanied by -
- (a) a certified copy of the accreditation letter issued by the Transport Education and Training Authority; and
 - (b) a cancelled company letterhead.
- (3) The chief inspector shall furnish an approved training provider with the appropriate certificate of registration and enter such registration into the national database.
- (4) An approved training provider shall inform the chief inspector of any change affecting its approval and registration under these Regulations within 14 days of such change.

Notes:

- (a) None

Withdrawal of approval and registration of lifting machinery entity or training provider

21. (1) Subject to subregulation (2), the approval and registration of a lifting machinery entity or training provider may be withdrawn if -
- (a) a lifting machinery entity no longer has the necessary competency or operational ability;
 - (b) a training provider is no longer accredited by the Transport Education and Training Authority; or
 - (c) they are convicted of an offence referred to in regulation 22.
- (2) The chief inspector may not withdraw an approval and registration unless -
- (a) the holder of such approval and registration has been informed of the intended withdrawal and of the grounds upon which it is based; and

- (b) such holder has been afforded a reasonable opportunity to make representations.
- (3) The chief inspector shall inform the holder concerned in writing of the reasons for the decision.
- (4) Any holder adversely affected by a decision of the chief inspector may appeal in writing to the Director-General: Labour against such decision.
- (5) An appeal referred to in subregulation (4) shall –
 - (a) be lodged within 60 days from the date on which the decision was made known; and
 - (b) set out the grounds for appeal.
- (6) After considering the grounds for appeal and the chief inspector's reasons for their decision, the Director-General: Labour shall confirm, set aside or amend the decision as soon as practicable.

Notes:

- (a) Appeals must be lodged to Labour Court

Offences and penalties

- 22.** Any person who contravenes or fails to comply with any of the provisions of regulations 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17(1), 17(2), 17(5), 17(6), 17(7), 18, 19(4), 19(5), 20(4) and 20(5) shall be guilty of an offence and liable upon conviction to a fine or to imprisonment for a maximum of 12 months and, in case of a continuous offence, to an additional fine not exceeding R200,00 or to additional imprisonment of one day for each day on which the offence continues: provided that the period of such additional imprisonment shall not exceed 90 days.

Repeal of regulations and transitional provisions

- 23.** (1) The Driven Machinery Regulations, 1988, and subsequent amendments are hereby repealed.
- (2) A user of a goods hoist as provided for in regulation 17 of the Regulations referred to in subregulation (1) above shall within five years of the publication

of these Driven Machinery Regulations comply with the provisions of the Lift, Escalator and Passenger Conveyor Regulations, 2010, in which “Access Goods only Lift” is defined.

Short title and commencement

- 24.** These Regulations shall be called the Driven Machinery Regulations, 2015, and shall come into effect on 30 September 2015