

S.I. No.30 of 1982.

SAFETY IN INDUSTRY (ABRASIVE WHEELS) REGULATIONS, 1982.

I, LIAM KAVANAGH, Minister for Labour, in exercise of the powers conferred on me by sections 6 and 71 of the Factories Act, 1955 (No. 10 of 1955), and the Labour (Transfer of Departmental Administration and Ministerial Functions) Order, 1966 ( S.I. No. 164 of 1966 ), after consultation with the Minister for Health, and after compliance with the Third Schedule to that Act, hereby make as special regulations the following Regulations:

1. These Regulations may be cited as the Safety in Industry (Abrasive Wheels) Regulations, 1982, and shall come into operation on the 1st day of June, 1982.

2. In these Regulations, unless the context otherwise requires—

"abrasive wheel" means—

( *a* ) a wheel, cylinder, disc or cone which, whether or not any other material is comprised in it, consists of abrasive particles held together by mineral, metallic or organic bonds, whether natural or artificial,

( *b* ) a mounted wheel or point and a wheel or disc having (in either case) separate segments of abrasive material,

( *c* ) a wheel or disc made (in either case) of metal, wood, cloth, felt, rubber or paper and having any surface consisting wholly or partly of abrasive material, or

( *d* ) a wheel, disc or saw, to any surface of which is attached a rim or segments consisting of diamond abrasive particles,

which is, or is intended to be, power-driven and is for use in any grinding or cutting operation;

"the Act" means the Factories Act, 1955 (No. 10 of 1955);

"the Minister" means the Minister for Labour;

"mounted wheel or point" means a wheel or point consisting (in either case) of abrasive particles held together by mineral, metallic or organic bonds, whether natural or artificial, and securely and permanently mounted on the end of a mandrel or quill;

"overhang", in relation to a mounted wheel or point, means that part of the mandrel or quill which is exposed between the collet in which the mandrel or quill is held and the part of the abrasive material nearest to the collet.

3. These Regulations apply to the following places where an abrasive wheel is used for any grinding or cutting operation—

( a ) every factory,

( b ) every premises to which, by virtue of section 83, 84 or 85 of the Act, the provisions of the Act mentioned in that section apply,

( c ) every dock, wharf, quay, warehouse, line or siding to which, by virtue of section 86(1) of the Act, the provisions of the Act mentioned in that section apply,

( d ) every harbour, wet dock or ship, the work carried out in which, being work referred to in section 87(1) of the Act, by virtue of that section the provisions of the Act mentioned in that section apply, and

( e ) every place and every line or siding where building operations or works of engineering construction are being undertaken to which, by virtue of section 88(1) or 89(1) of the Act, the provisions of the Act mentioned in that section apply.

4. (1) Regulations 6, 7, 11(a), 11 (b) and 12 of these Regulations do not apply to an abrasive wheel manufactured of metal, wood, cloth, felt, rubber or paper and having any surface consisting wholly or partly of abrasive material.

(2) Regulations 11 (a), 11 (b) and 12 of these Regulations do not apply to an abrasive wheel consisting wholly of abrasive particles held together by natural bonds.

(3) Regulation 6 of these Regulations does not apply to an abrasive wheel having separate segments of abrasive material.

(4) Regulations 6, 7, 10(1), 11, 12 and 18 of these Regulations do not apply to an abrasive wheel which does not exceed 235 millimetres in diameter, is manufactured of cloth, felt, rubber or paper and has any surface consisting wholly or partly of abrasive material, when the wheel is used in a portable machine.

(5) Regulations 7, 10(1), 11 and 12 of these Regulations do not apply to an abrasive wheel when it is used for grinding glass.

(6) Regulations 6, 7 and 12 of these Regulations do not apply to any wheel, disc or saw of a kind referred to in clause (d) of the definition of "abrasive wheel" in Regulation 2 of these Regulations.

5. (1) Where, in respect of an abrasive wheel of a particular class or type, a machine of a particular class or type (or part of such a machine) or an operation or process of a particular class or type, the Minister is satisfied that a particular requirement of these Regulations is impracticable or inappropriate, or is not necessary to protect persons employed, he may by a certificate in writing declare that that requirement shall not apply to an abrasive wheel, machine, operation or process of that class or type and on the issue of such a certificate the requirement specified in it shall not, until the revocation of the certificate, apply to a wheel, machine, operation or process belonging to a class or type so specified.

(2) The Minister may specify conditions in a certificate under this Regulation, and may at his discretion revoke such a certificate.

6. (1) No abrasive wheel having a diameter of more than 55 millimetres shall be taken into use in a place to which these Regulations apply after the commencement of these Regulations unless the occupier of the place has ensured that the abrasive wheel or its washer is clearly marked with the maximum permissible speed in revolutions per minute specified by the manufacturer for that abrasive wheel.

(2) No abrasive wheel having a diameter of 55 millimetres or less shall be taken into use in a place to which these Regulations apply after the commencement of these Regulations unless the occupier of the place keeps permanently fixed in the room in which grinding is ordinarily carried out with that abrasive wheel a notice clearly stating the maximum permissible speed in revolutions per minute specified by the manufacturer for that abrasive wheel or for abrasive wheels of the class to which it belongs and, in the case of mounted wheels and points, the overhang permissible at that speed.

(3) When grinding with an abrasive wheel having a diameter of 55 millimetres or less is not ordinarily carried out in a particular room, the notice required by paragraph (2) of this Regulation shall be kept posted at a place and in a position where it may easily be read by persons employed in grinding with the wheel.

(4) No abrasive wheel shall be operated at a speed in excess of the appropriate maximum permissible speed in revolutions per minute specified in paragraph (1) or (2) of this Regulation.

(5) Where the diameter of an abrasive wheel has been reduced its maximum permissible speed (as specified by the manufacturer) may be increased to that speed which bears the same proportion to the maximum permissible speed as the original diameter of the wheel bears to the reduced diameter.

7. (1) There shall be securely affixed to every power-driven machine having any spindle on which an abrasive wheel is (or is intended to be) mounted a notice specifying—

( a ) in the case of each such spindle (other than a spindle referred to in subparagraph (b) or (c) of this paragraph) its maximum working speed,

( *b* ) in the case of any such spindle for which arrangements are provided for operating it at more than one working speed, each such speed, and

( *c* ) in the case of any such spindle for which arrangements are provided for operating the spindle at an infinite number of working speeds within a specified range, the maximum and minimum working speeds of the spindle.

(2) No spindle on a power-driven machine having an abrasive wheel mounted or provision for such mounting shall while an abrasive wheel is mounted on it be operated at a speed in excess of the appropriate maximum working speed.

(3) The occupier of a place to which these Regulations apply shall, when so required by an inspector, provide him with all such facilities and information as are necessary to enable him to determine the working speed of any spindle, shaft, pulley, or other appliance, used to operate an abrasive wheel.

(4) The speed of every air-driven spindle on which an abrasive wheel is mounted shall be controlled by a governor or other device which prevents the speed of the spindle from exceeding the appropriate maximum working speed for that spindle.

(5) Every governor and other device used for controlling the speed of an air-driven spindle on which an abrasive wheel is mounted shall be properly maintained.

(6) References in this Regulation to maximum and minimum speeds are to those so specified by the manufacturer of the machine concerned.

8. Every abrasive wheel shall be properly mounted.

9. (1) Subject to paragraph (5) of this Regulation, no person shall mount any abrasive wheel unless—

( *a* ) he has been trained in accordance with the Schedule to these Regulations,

( *b* ) he is competent to mount such a wheel, and

( *c* ) he has been appointed by the occupier of a place to which these Regulations apply to carry out such an operation in respect of the class or type of abrasive wheel to which the abrasive wheel concerned belongs.

(2) Every appointment referred to in paragraph (1) ( *c* ) of this Regulation shall be recorded in a register kept by the occupier for the purposes of this Regulation.

(3) Particulars of the class or type of abrasive wheel to which an appointment referred to in paragraph (1) (c) of this Regulation relates shall be specified in the register referred to in paragraph (2) of this Regulation, and every person appointed under this Regulation shall be furnished by the occupier with a copy of the entry in the register of his appointment and of any entry revoking such an appointment.

(4) Any appointment under this Regulation may be revoked by the occupier at any time by a dated entry in the register kept for the purposes of this Regulation.

(5) Paragraph (1) of this Regulation does not apply to any person who mounts any mounted wheel or point, or to a person who is undergoing training in mounting abrasive wheels and working under the immediate supervision of a person appointed under this Regulation.

10. (1) Subject to paragraph (2) of this Regulation, a guard shall be provided and kept in position at every abrasive wheel in motion.

(2) Paragraph (1) of this Regulation does not apply where, because of work being done at a wheel or because of the work ordinarily done or intended to be done at a wheel or because of the nature of the wheel, the use of a guard would be impracticable.

11. Every guard provided in pursuance of these Regulations shall—

( a ) so far as is reasonably practicable, be of such a design and so constructed as to contain every part of the abrasive wheel in the event of a fracture of the wheel (or of any part of the wheel) occurring while it is in motion,

( b ) be properly maintained and so secured as to prevent its displacement in the event of any such fracture, and

( c ) enclose the whole of the abrasive wheel except such part as is necessarily exposed for the purpose of any work being done at the wheel or, where a non-adjustable guard is used, for the purpose of the work which is ordinarily done or ordinarily intended to be done at the wheel.

12. (1) Where the work which is ordinarily done (or ordinarily intended to be done) at an abrasive wheel requires the exposed arc of the wheel to exceed 180 degrees measured at the centre of the wheel, the wheel shall where practicable be tapered from its centre towards its periphery by at least 6 per cent on each side and shall be mounted between suitable protection flanges.

(2) The protection flanges referred to in paragraph (1) of this Regulation shall be of substantial construction, properly maintained, have the same degree of taper as the wheel mounted between them and shall—

( a ) in the case of a wheel of 300 millimetres or less in diameter, be of a diameter equal to at least half the diameter of the wheel,

( b ) in the case of a wheel of more than 300 millimetres but not exceeding 750 millimetres in diameter, be of a diameter equal to at least the diameter of the wheel less 150 millimetres, and

( c ) in the case of a wheel of more than 750 millimetres in diameter, be of a diameter equal to at least the diameter of the wheel less 200 millimetres.

13. All practicable steps shall be taken by the occupier of a place to which these Regulations apply to ensure that an abrasive wheel used in that place is suitable for the work for which it is used having regard to the risk of injury to persons employed.

14. No abrasive wheel shall be used in a machine unless the machine is provided with an efficient device or devices for starting and cutting off the power to the machine and the control) (or controls) of the device (or devices) shall be in such a position and of such design and construction as to be readily and conveniently operated by the person operating the machine.

15. Where at any abrasive wheel there is a rest for supporting a workpiece, the rest shall at all times while the wheel is in motion be properly secured and adjusted so as to be as close as practicable to the exposed part of the abrasive wheel, and the rest shall be of substantial construction and properly maintained.

16. A notice, in such form as the Minister approves, regarding the dangers arising from the use of abrasive wheels and the precautions to be observed in relation to them shall be affixed in every room in which grinding or cutting by means of abrasive wheels is ordinarily carried out or, where such grinding or cutting is not ordinarily carried out in a particular room, at a place where and in such a position that it may be easily read by persons employed in grinding or cutting.

17. (1) The floor adjacent to every fixed machine on which an abrasive wheel is (or is intended to be) mounted shall be maintained in good and even condition and, so far as practicable, shall be kept clear of loose material and prevented from becoming slippery.

(2) All practicable steps shall be taken to ensure that the floor of any room or place in which any portable machine on which an abrasive wheel is mounted is used is in good and even condition, is kept clear of loose material and does not become slippery.

18. (1) No person using an abrasive wheel shall wilfully misuse or remove any guard, or wilfully misuse any protection flanges or other appliances provided in pursuance of these Regulations or any rest for a workpiece.

(2) Every person employed shall make proper use of guards, protection flanges and other appliances provided in pursuance of these Regulations and rests for workpieces and, if he discovers any defect in such appliances or rest, shall as soon as practicable report it to the occupier, manager or other person in authority.

19. These Regulations shall be construed as modifying, with respect to every class or description of factory, section 23 (1) of the Act.

20. Regulation 70 (2) and 70 (3) of the Shipbuilding and Ship-repairing (Safety, Health and Welfare) Regulations, 1975 ( S.I. No. 322 of 1975 ), and Regulation 131 of the Construction (Safety, Health and Welfare) Regulations, 1975 ( S.I. No. 282 of 1975 ), do not apply in relation to an abrasive wheel.

21. Regulation 13 of the Factories (Grinding of Metals) (Miscellaneous Industries) Regulations, 1973 ( S.I. No. 313 of 1973 ), and Regulation 18 of the Factories (Grinding of Cutlery and Edge Tools) Regulations, 1973 ( S.I. No. 314 of 1973 ), are hereby revoked.

#### SCHEDULE

##### Training required by Regulation 9 (1)

The training shall include suitable and sufficient instruction in the following matters in relation to each class or type of abrasive wheel in respect of which it is proposed to appoint the person being trained:

- (1) proper methods relating to the mounting of abrasive wheels;
- (2) hazards arising from the use of abrasive wheels and precautions which should be observed;
- (3) methods of marking abrasive wheels as to type and speed;
- (4) methods of storing, handling and transporting abrasive wheels;
- (5) methods of inspecting and testing abrasive wheels to check for damage;
- (6) the functions of all components used with abrasive wheels, including flanges, washers, bushes and nuts used in mounting, and knowledge of the correct and incorrect methods of assembling all components and of correct balancing of abrasive wheels;
- (7) the proper method of dressing an abrasive wheel;
- (8) the adjustment of the rest of an abrasive wheel;
- (9) the requirements of these Regulations;
- (10) the use of advisory literature relating to the mounting of abrasive wheels.

GIVEN under my Official Seal this 25th day of February, 1982.

LIAM KAVANAGH,