

- (b) in any premises or place or in the carrying on of any process or operation or work to which the provisions of Part V of the Act are applied by Sections 107 to 112 thereof.

Revocation. 3. The Dangerous Occurrences Notification Order (Northern Ireland), 1935 is hereby revoked.

Sealed with the Official Seal of the Ministry of Labour and National Insurance for Northern Ireland this 19th day of June, 1947, in the presence of

(L.S.)

F. C. S. Moore,

Assistant Secretary.

Stormont, Belfast.

SCHEDULE

CLASSES OF OCCURRENCES

1. Bursting of a revolving vessel, wheel, grindstone or grinding wheel moved by mechanical power ;
2. Collapse or failure of a crane, derrick, winch, hoist or other appliance used in raising or lowering persons or goods, or any part thereof (except the breakage of chain or rope slings), or the overturning of a crane ;
3. Explosion or fire causing damage to the structure of any room or place in which persons are employed, or to any machine or plant contained therein, and resulting in the complete suspension of ordinary work in such room or place or stoppage of machinery or plant for not less than five hours, where such explosion or fire is due to (i) the ignition of dust, gas or vapour, or (ii) the ignition of celluloid or substances composed wholly or in part of celluloid ;
4. Electrical short circuit, or failure of electrical machinery, plant or apparatus, attended by explosion or fire or causing structural damage thereto, and involving its stoppage or disuse for not less than five hours ;
5. Explosion or fire affecting any room in which persons are employed and causing complete suspension of ordinary work therein for not less than twenty-four hours ;
6. Explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas.

Kiers Special Regulations

SPECIAL REGULATIONS, DATED 22ND JANUARY, 1947, MADE BY THE MINISTRY OF LABOUR AND NATIONAL INSURANCE UNDER SECTION 65 OF THE FACTORIES ACT (NORTHERN IRELAND), 1938.

1947. No. 9

The Ministry of Labour and National Insurance for Northern Ireland, in pursuance of the powers conferred upon it by Section 65 of the Factories Act (Northern Ireland), 1938 (hereinafter referred to as "the Act") and of all other powers enabling it in that behalf, hereby makes the following Special Regulations :—

PART I

Preliminary

1. These Regulations may be cited as the Kiers Special Regulations (Northern Ireland), 1947, and shall come into force on the First day of May, 1947, except that Regulations 8, 9, 10 and 13 shall not apply until after the expiration of twelve months from the said date.

2. These Regulations shall, subject to the provisions of Regulation 4 hereof, apply to all factories in which kiers are used for the purpose of boiling textile material.

3. In these Regulations the following expressions have the meanings hereby assigned to them respectively, that is to say :—

Kier means a fixed vessel used for boiling textile material, wherein boiling liquid is circulated by means of steam or mechanical power through a pipe, channel or duct, so constructed and arranged that the liquid is discharged over the textile material and percolates through it.

Atmospheric or open kier means a *kier* so constructed and arranged that it cannot be worked at a pressure above atmospheric pressure.

Kier system means a *kier* together with its inlet and outlet and circulating pipes, and any pump, injector, steam pipe or heater used in connection with that *kier*.

Disconnection means the complete interruption of the flow of liquor, water, or steam through a pipe either (a) by the removal of a sufficient portion of the pipe, together with the blanking of the end of the pipe on the supply side, or (b) by a special disconnecting appliance of a type approved in writing by the *Chief Inspector*.

Disconnect means to interrupt completely the flow of liquor, water or steam through a pipe by one of the two methods of *disconnection*.

Hot liquor or hot water means liquor or water at a temperature exceeding 105° F.

Competent person means a person who is experienced in the operation and working of *kiers* and capable of manipulating and working in accordance with these Regulations all valves, taps, pumps, *disconnecting* arrangements, or other appliances provided for the *kiers*.

Authorised person has the meaning assigned to it in Regulation 24.

Entry into a *kier* shall be deemed to have been made by a person if either of his feet is within the *kier*; and *enter* shall have a similar meaning.

Chief Inspector has the same meaning as in the Act.

PART II

EXCEPTIONS

4. (i) Nothing in these Regulations shall apply to a *kier* in which the material is boiled in a container or wagon or on a moveable

carriage, provided that the loading and unloading of such container, wagon or carriage is carried on entirely outside the *kier*.

(ii) Regulations 8, 9, 10, 22 and 27 shall not apply in the case of a *kier* which is filled by means of a mechanical piler or is customarily filled from outside without *entry* by a person into the *kier*, and which is entered only for the purpose of sheeting up the material after filling or occasionally for rectifying a fault or for repair or maintenance purposes.

(iii) If the *Chief Inspector* is satisfied that by reason of exceptional circumstances in any works subject to these Regulations, or by reason of the infrequency of the process, or for any other reason, all or any of the requirements of the Regulations are not necessary for the protection of persons employed in such works, he may by certificate in writing (which he may in his discretion revoke at any time) exempt such works or any part of such works, or any *kier* or *kier system*, from the operation of all or any such requirements, subject to such conditions as he may prescribe in that certificate. Where such an exemption is granted, a legible copy of the certificate, showing the conditions subject to which it has been granted, shall be kept affixed in the works.

PART III

DUTIES OF OCCUPIERS

5. It shall be the duty of the occupier of every factory to which these Regulations apply to observe this Part of these Regulations.

Steam Admission

6. The admission of steam into a *kier* or *kier system* shall be controlled by a screw-down wheel valve, and not merely by a tap or cock. In the case of every *kier* which is customarily entered for the purpose of plaiting down, filling, arranging, packing or emptying textile material, means shall be provided for locking the valve in the closed position or for *disconnecting* the steam supply pipe.

Hot Liquor Admission

7. *Hot liquor* shall not be prepared except in a vessel or tank separate from the *kier* in which such *hot liquor* is to be used, and *hot liquor* shall not be admitted to nor shall liquor be rendered *hot* in the *kier* until the loading has been completed.

Liquor and Water Admission Pipes

8. Every supply pipe through which liquor or water is conducted to a *kier* shall, in addition to the valve or cock controlling admission of liquor or water for the ordinary working of the *kier*, be provided with arrangements for *disconnection* of the pipe on the *kier* side of such valve or cock in such a way as to isolate the *kier* from any other *kier* or vessel,

and to ensure that no liquor or water can flow from the supply side of the pipe.

Provided that in the case of a water supply pipe such arrangements for *disconnection* shall not be required if there is a non-return valve in the pipe to each *kier* on the *kier* side of the control valve or cock.

External Circulation Pipes

9. Every *kier system* in which the circulation is effected through an external pipe shall be provided with arrangements for *disconnection* of the pipe in such a way as to ensure that no liquor or water can flow into the upper part of the *kier* or escape from the ends of the pipe where it is *disconnected*.

Internal Circulation Pipes

10. Every *kier system* in which the circulation is effected through an internal pipe or puffer pipe, shall be provided with either :—

- (a) arrangements for *disconnection* of the steam pipe, such arrangements to be in addition to the valve controlling the steam supply and to be placed on the *kier* side of such valve, or
- (b) efficient means for closing the top of the puffer pipe.

Pumps

11. Where the circulation of liquor in a *kier system* is effected by means of a pump, efficient means shall be provided for preventing the accidental starting of the pump.

Position of Discharges

12. The open end of the pipe through which the liquor is discharged from a *kier*, and the open end of a vent, inlet or other pipe through which liquor may escape from a *kier*, shall be so placed or arranged that no person is exposed to risk of scalding.

Discharge Pipes and Channels

13. The pipe used for discharging the liquor from a *kier* shall not be connected with a discharge pipe from any other *kier* through any common pipe, channel or chamber in which the pressure can rise above atmospheric pressure.

Position of Valves and Taps

14. The control for any valve or tap shall be so placed that the person operating it is not exposed to risk of scalding.

Bayonet-jointed Kier Covers

15. Where a *kier* has a bayonet-jointed cover, efficient means shall be provided for preventing (a) the rise of pressure inside the *kier* above

atmospheric pressure before the cover is in the fully locked position, and (b) the cover becoming moved from that position before the pressure inside the *kier* has been reduced to atmospheric pressure.

Distinguishing Marks

16. Every *kier* shall have a number or distinguishing mark clearly and legibly marked on it. The control of every valve or tap, and every *disconnecting* arrangement, used on a *kier* or *kier system* shall be clearly and legibly marked with the same number or distinguishing mark as the *kier*, except where it is otherwise clear that the valve, tap or *disconnecting* arrangement is connected with one particular *kier* and no other.

Height of Atmospheric or Open Kiers above Platforms

17. (1) In crofts or *kier* houses erected or substantially reconstructed after the date on which these Regulations come into force, the height of the edge of an *atmospheric* or *open kier* above the working platform or standing place shall be not less than 2 feet 9 inches.

(2) In other crofts or *kier* houses, if the height of the edge of an *atmospheric* or *open kier* above the working platform or standing place is less than 2 feet 9 inches, the *kier* shall be securely fenced to that height.

Height of Hot Liquor Tanks or Hot Water Tanks above Platforms

18. Every fixed vessel or tank (other than a *kier*) used in connection with a *kier* or *kier system*, and containing *hot liquor* or *hot water* shall, if the edge of such vessel or tank is less than 3 feet above the level of the adjoining platform or standing place, be either—

- (i) securely fenced to a height of not less than 3 feet; or
- (ii) provided with an effective grid or other effective cover.

Ways above Kiers or Tanks containing Hot Liquor or Hot Water

19. No plank, ladder, stair or gangway shall be placed over any uncovered *kier*, tank or other fixed vessel containing *hot liquor* or *hot water* unless it is securely fixed and fenced on each side to a height of not less than 2 feet 9 inches either by upper and lower rails or by sheet fencing.

Spacing of Atmospheric or Open Kiers

20. (1) In crofts or *kier* houses erected or substantially reconstructed after the date on which these Regulations come into force, the distance between the edges of an *atmospheric* or *open kier* and of an adjacent *kier* shall be not less than 18 inches, and there shall be a space for passage round each *kier* which at no point shall be less than 12 inches wide.

(2) In other crofts or *kier* houses, where the edges of adjacent *kiers* are less than 9 inches apart, a gangway not less than 18

inches wide shall be provided over the space between the adjacent *kiers*. This gangway shall be of adequate length and provided with safe means of access. Both the gangway and the means of access to it shall be fenced on each side to a height of not less than 2 feet 9 inches either by upper and lower rails or by sheet fencing.

Access to Interior of Kiers

21. Suitable ladders to enable persons to *enter* into and emerge from *kiers* easily shall be provided and kept available in positions near to the *kiers*.

Notice of Permission to enter Kier

22. There shall be provided for every *kier* to which Regulations 8, 9 and 10 apply an appropriate notice or sign to be affixed when the *kier* may be entered in accordance with Regulation 27.

Maintenance

23. Every valve or tap controlling the admission of steam, liquor or water to a *kier*, and the special safety appliances required by these Regulations, shall be kept in good repair.

Responsibility for Kier Operation

24. The occupier shall appoint a *competent person* to supervise the working of each set of *kiers* in accordance with these Regulations and to control the *entry* of persons into those *kiers*. Each person so appointed shall be known as the *authorised person* for that set of *kiers*. The occupier may appoint a second *competent person* as an *authorised person* to act as deputy in the absence of the first *authorised person*, and may also appoint a particular person to perform specified duties in connection with the completion of operation and blowing down of the *kiers*. The name of every person appointed in pursuance of this Regulation shall be stated in a notice affixed near the *kiers* concerned.

PART IV

DUTIES OF PERSONS EMPLOYED

25. It shall be the duty of every person employed in a factory to which these Regulations apply to observe this Part of these Regulations.

Control of Appliances

26. The *authorised person* shall take all reasonable steps to secure that all valves, taps, *disconnecting* arrangements, pumps, notices, signs, and other appliances in connection with the *kiers* under his supervision, are properly manipulated and used in accordance with these Regulations.

Precautions before Entry into Kiers

27. (1) Subject to Regulation 29, the *authorised person* shall take all reasonable steps to ensure that no person shall *enter* into or remain in a *kier* to which this Regulation applies unless—

- (a) no *hot liquor* or *hot water* is present in the *kier* or *kier system* ;
- (b) either every branch steam pipe through which steam may flow into the *kier* or *kier system* is *disconnected*, or the valve controlling the supply of steam is closed and locked ;
- (c) the *kier* is isolated from every other vessel by the means required by Regulation 8 ;
- (d) in the case of a *kier* with an external circulating pipe, such pipe is *disconnected* by the arrangements required by Regulation 9 ;
- (e) in the case of a *kier* with an internal circulating pipe or puffer pipe, the steam pipe is *disconnected*, or the top of the puffer pipe is effectively closed, by the means required by Regulation 10 ;
- (f) in the case of a *kier* with pump circulation the pump is, by the means required by Regulation 11, effectively secured against accidental starting ; and
- (g) the notice or sign required by Regulation 22 is affixed close to the entrance to the *kier*.

(2) The *authorised person* shall not affix the said notice or sign or cause it to be affixed until he has ascertained that the foregoing conditions (a) to (f) are fulfilled. He shall not remove it or permit it to be removed until he has ascertained that no person is in the *kier*, but subject to this he shall cause its removal as soon as the purpose for which entry of the *kier* was required has been completed. So long as the notice or sign is affixed, he shall take all reasonable care to ensure that the said conditions (a) to (f) remain fulfilled.

28. Subject to Regulation 29, in the case of a *kier* which is filled by means of a mechanical piler or is customarily filled from outside without *entry* into such *kier*, the *authorised person* shall take all reasonable steps to ensure that no person shall *enter* into or remain in such *kier* except for the purpose of sheeting up the material after filling or occasionally for rectifying a fault, and then only if :—

- (a) no *hot liquor* or *hot water* is present in the *kier* or *kier system* ;
- (b) all valves or taps which control the admission of steam, liquor or *hot water* into that *kier* are closed ; and
- (c) the pumps, or other means by which the movement or circulation of liquor in that *kier system* is effected, are secured to prevent such circulation.

Entry into Kiers for Repairs or Maintenance

29. In the case of *entry* by a person into a *kier* for the purpose of examination, repair, limewashing, or any similar purpose in connection with maintenance, Regulations 27 and 28 shall not apply, and instead thereof the following provisions shall apply :—

The foreman, or person in charge of the persons engaged in the above-named work, shall take all reasonable care to ensure that no person shall *enter* or remain in a *kier* unless :—

- (a) no *hot liquor* or *hot water* is present in the *kier* or *kier system* ;
- (b) all valves or taps which control the admission of steam, liquor or *hot water* into that *kier* are closed, or adequate isolation is effected by *disconnection* ; and
- (c) the pumps, or other means by which the movement or circulation of liquor in that *kier system* is effected, are secured to prevent such circulation.

Unauthorised Entry into Kiers

30. No person shall *enter* a *kier* except—

- (i) when a notice or sign provided in pursuance of Regulation 22 is affixed close to the entrance to the *kier* ; or
- (ii) in the case of a *kier* to which Regulation 28 applies, with the consent of the *authorised person* ; or
- (iii) in cases where Regulation 29 applies, with the consent of the foreman or person in charge.

Standing or Sitting on Edge of Kiers

31. No person shall sit or stand on the edge of an open *kier* or on the fencing round it.

Interference with Appliances by Unauthorised Persons

32. No person other than an *authorised person* shall, without the knowledge and consent of the *authorised person*, interfere with, manipulate or work any valves, taps, *disconnecting* arrangements, pumps, notices, signs or other appliances used in connection with a *kier* : Provided that this Regulation shall not preclude any other person, in a case of emergency or likelihood of serious danger or damage, from taking such action as may be necessary in the circumstances of the case to avoid such danger or damage.

Sealed with the Official Seal of the Ministry of Labour and National Insurance for Northern Ireland this 22nd day of January, 1947, in the presence of

(L.S.)

F. C. S. Moore,

Assistant Secretary.