

Workplace Safety and Health (Shipbuilding and Ship-Repairing) Regulations 2008

Enacting Formula

Part I PRELIMINARY

- ☐ 1 Citation and commencement
- ☐ 2 Definitions
- ☐ 3 Application

Part II SAFETY AND HEALTH MANAGEMENT ARRANGEMENT

- ☐ 4
- ☐ 5
- ☐ 6 Safety and health training
- ☐ 7 Duties of ship repair manager
- ☐ 8 Ship repair manager to approve work
- ☐ 9 Notification of work carried out on board ship in harbour

Part III VESSEL SAFETY CO-ORDINATION COMMITTEE

- ☐ 10 Vessel safety co-ordination committee
- ☐ 11 Role of vessel safety co-ordination committee
- ☐ 12 Composition of vessel safety co-ordination committee
- ☐ 13 Frequency of meetings
- ☐ 14 Duties of chairman
- ☐ 15 Duties of secretary
- ☐ 16 Handing-over procedure for shifts

Part IV PERMIT-TO-WORK SYSTEM

- ☐ 17 Application of this Part
- ☐ 18 Implementation of permit-to-work
- ☐ 19 No high-risk work without permit-to-work
- ☐ 20 Application for permit-to-work
- ☐ 21 Evaluation of permit-to-work
- ☐ 22 Issue of permit-to-work
- ☐ 23 Posting of permit-to-work
- ☐ 24 Monitoring of high-risk work
- ☐ 25 Duty to report incompatible work
- ☐ 26 Revocation of permit-to-work

Part V HOT-WORK PERMIT SYSTEM

- ☐ 27 Implementation of hot-work permit
- ☐ 28 No hot-work without hot-work permit
- ☐ 29 Application for hot-work permit
- ☐ 30 Evaluation of hot-work permit

- ☐ 31 Issue of hot-work permit
- ☐ 32 Person carrying out hot-work to be competent in hot-work
- ☐ 33 Measures for hot-work
- ☐ 34 Marking of hot-work area
- ☐ 35 Fire watchman
- ☐ 36 Duty to report incompatible work
- ☐ 37 Daily review and revocation of hot-work permit

Part VI GENERAL PROVISIONS

- ☐ 38 Safety of equipment
- ☐ 39 Approval of hazardous substances
- ☐ 40 Falling hazards
- ☐ 41 Drowning hazards
- ☐ 42 Slipping hazards
- ☐ 43 Hazards arising from protruding objects
- ☐ 44 Prevention of accidental closure of hatch
- ☐ 45 Spray painting
- ☐ 46 Vehicular hazards
- ☐ 47 Lighting
- ☐ 48 Disposal of debris
- ☐ 49 Prohibition on smoking
- ☐ 50 Safety signs
- ☐ 51 Emergency exits
- ☐ 52 Personal protective equipment

Part VII ELECTRICAL SAFETY

- ☐ 53 Electrical installations, equipment and connections
- ☐ 54 Electrical welding equipment

Part VIII WELDING AND CUTTING OPERATIONS

- ☐ 55 Gas cylinders
- ☐ 56 Gas manifolds
- ☐ 57 Pipe lines and gas hoses
- ☐ 58 Gas equipment to be of good construction, etc.
- ☐ 59 Safety devices
- ☐ 60 Safety measures during break in gas welding and cutting
- ☐ 61 Inspection of hot-work equipment
- ☐ 62 No welding in wet conditions
- ☐ 63 Adequate ventilation
- ☐ 64 Metallic fumes
- ☐ 65 Welding and cutting on containers that held flammable substances

Part IX CRANES, EMPLOYEE'S LIFTS AND MATERIAL HANDLING MACHINERY

- ☐ 66 Strength and stability
- ☐ 67 Capacity chart
- ☐ 68 Thorough examination and inspection
- ☐ 69 Handling of suspended loads
- ☐ 70 Prohibition of riding on loads
- ☐ 71 Cranes or machinery at rest
- ☐ 72 Operator of employee's lift
- ☐ 73 System for calling lifts

Part X MISCELLANEOUS

- ☐ 74 Offence
- ☐ 75 Revocation

No. S 270

WORKPLACE SAFETY AND HEALTH ACT ([CHAPTER 354A](#))

WORKPLACE SAFETY AND HEALTH (SHIPBUILDING AND SHIP-REPAIRING) REGULATIONS 2008

In exercise of the powers conferred by [sections 30](#) and [65 of the Workplace Safety and Health Act](#), Mr Gan Kim Yong, Senior Minister of State, charged with the responsibility of the Minister for Manpower, hereby makes the following Regulations:

PART I

PRELIMINARY

Citation and commencement

1. [These Regulations](#) may be cited as the Workplace Safety and Health (Shipbuilding and Ship-Repairing) Regulations 2008 and shall come into operation on 1st August 2008.

Definitions

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

“competent person” means a person who has sufficient experience and training to perform the work required to be carried out;

“designated person” means a competent person appointed in writing by —

- (a) an occupier of a shipyard;
- (b) an employer of persons carrying out work in a shipyard or on board a ship in a harbour; or
- (c) a principal who gives direction to persons on the work carried out by those persons

in a shipyard or on board a ship in a harbour,

to perform any task or duty prescribed under these Regulations;

“employee’s lift” means a powered car operating in guides and used primarily to carry persons in a substantially vertical direction;

“fire watchman” means a fire watchman appointed under [regulation 35\(1\)](#);

“hazardous work” means any work that is likely to endanger the life of any person in a shipyard or on board a ship in a harbour and includes any type of work which is specified by the Commissioner in writing as hazardous work;

“hot-work” means riveting, welding, flame cutting or burning and includes any other work involving the use or generation of heat or the production of sparks;

“responsible person”, in relation to any work carried out in a shipyard or on board a ship in a harbour, means —

(a) in the case of a shipyard, the occupier of the shipyard; and

(b) in the case of a ship in a harbour —

(i) the employer of any person who carries out the work; or

(ii) the principal under whose direction any person carries out the work;

“safety assessor” means a safety assessor appointed under [regulation 18\(1\)\(ii\)](#) or [27\(1\)\(ii\)](#);

“shipyard” includes any dry or wet dock, wharf, jetty and quay, and the precincts thereof;

“ship repair manager” means a ship repair manager appointed under [regulation 7](#).

Application

3. [These Regulations](#) shall apply to any work carried out in a shipyard or on board a ship in a harbour in connection with —

- (a) the construction, re-construction, repair, refitting, fitting, painting, finishing, furnishing or breaking up of a ship;
- (b) the scaling, scurfing or cleaning of boilers (including combustion chambers and smoke boxes) in a ship;
- (c) the cleaning of any tank, bilges or holds in a ship; and
- (d) the survey or inspection of a ship or its contents (where such survey or inspection is not carried out by the crew of the ship).

PART II

SAFETY AND HEALTH MANAGEMENT ARRANGEMENT

4. *[Deleted by S 610/2009 wef 01/03/2010]*

5. *[Deleted by S 610/2009 wef 01/03/2010]*

Safety and health training

6.—(1) It shall be the duty of —

- (a) the employer of any person who carries out hazardous work in a shipyard or on board a ship in a harbour; or
- (b) the principal under whose direction any person carries out hazardous work in a shipyard or on board a ship in a harbour,

to ensure that the person does not carry out any hazardous work unless he has undergone a safety and health training course approved by the Commissioner.

(2) It shall be the duty of every person not to carry out any hazardous work in a shipyard or on board a ship in a harbour unless he has undergone a safety and health training course approved by the Commissioner.

(3) It shall be the duty of —

- (a) the employer of any person who carries out hot-work in a shipyard or on board a ship in a harbour; or
- (b) the principal under whose direction any person carries out hot-work in a shipyard or on board a ship in a harbour,

to ensure that the person does not carry out any hot-work unless he has undergone a safety and health training course on hot-work approved by the Commissioner.

(4) It shall be the duty of every person not to carry out any hot-work in a shipyard or on board a ship in a harbour unless he has undergone a safety and health training course on hot-work approved by the Commissioner.

(5) It shall be the duty of —

- (a) the employer of any person who carries out spray painting work, or painting in a confined space, in a shipyard or on board a ship in a harbour; or
- (b) the principal under whose direction any person carries out spray painting work, or painting in a confined space, in a shipyard or on board a ship in a harbour,

to ensure that the person does not carry out any spray painting work, or painting in a confined space, unless he has undergone a safety and health training course on painting approved by the Commissioner.

(6) It shall be the duty of every person not to carry out any spray painting work, or painting in a confined space, in a shipyard or on board a ship in a harbour unless he has undergone a safety and health training course on painting approved by the Commissioner.

(7) It shall be the duty of —

- (a) the employer of any person who carries out oversight or supervisory work in a shipyard or on board a ship in a harbour; or
- (b) the principal under whose direction any person carries out oversight or supervisory work in a shipyard or on board a ship in a harbour,

to ensure that the person does not oversee or supervise any work (including any process) in the shipyard or on board the ship in the harbour unless he has received adequate safety and health training to ensure that the work which he oversees or supervises can be carried out safely.

(8) It shall be the duty of every person not to oversee or supervise any work (including any process) in a shipyard or on board a ship in a harbour unless he has received adequate safety and health training to ensure that the work that he oversees or supervises can be carried out safely.

Duties of ship repair manager

7.—(1) It shall be the duty of —

- (a) in the case of a ship in a shipyard, the occupier of the shipyard; and
- (b) in the case of a ship in a harbour, the master, owner or agent of the ship,

to appoint a ship repair manager to take charge of and co-ordinate all activities relating to the construction or repair of the ship.

(2) It shall be the duty of the person referred to in paragraph (1)(a) or (b), as the case may be, to ensure that no person is appointed as a ship repair manager unless the person has received adequate safety and health training to ensure that he is able to co-ordinate safely all activities relating to the construction or repair of the ship.

Ship repair manager to approve work

8. It shall be the duty of the master, owner, agent or crew of a ship in a shipyard or in a harbour not to carry out any work on the ship without the approval of the ship repair manager.

Notification of work carried out on board ship in harbour

9.—(1) Where any work referred to in [regulation 3](#) is to be carried out on board a ship in a harbour, it shall be the duty of the master, owner or agent of the ship to notify the Commissioner of such work 3 days prior to the commencement.

(2) For the purpose of [paragraph \(1\)](#), the Commissioner may devise and use such forms as he may consider necessary.

PART III

VESSEL SAFETY CO-ORDINATION COMMITTEE

Vessel safety co-ordination committee

10. Where any hazardous work is to be carried out on board any ship or the structural part of any ship under construction, it shall be the duty of —

- (a) in the case of a ship in a shipyard, the occupier of the shipyard; and
- (b) in the case of a ship in a harbour, the master, owner or agent of the ship,

to establish a vessel safety co-ordination committee for that ship.

Role of vessel safety co-ordination committee

11.—(1) It shall be the duty of the person referred to in [regulation 10\(a\)](#) or [\(b\)](#), as the case may be, to ensure that [paragraphs \(2\)](#) and [\(3\)](#) are complied with.

(2) The vessel safety co-ordination committee shall plan and co-ordinate all work that is to be carried out on board the ship so that such work is done safely and with due regard to the health of all persons working on the ship.

(3) In performing its role referred to in [paragraph \(2\)](#), the vessel safety co-ordination committee shall —

- (a) review and discuss regularly all matters relating to the safety and health of the persons involved in the work;
- (b) draw up a plan for the co-ordination of the work to ensure that where different types of work are being carried out at the same time, the types of work are compatible;
- (c) ensure that all relevant first-line supervisors and the master, owner and agent of the ship or their representatives are informed of the plan;
- (d) review on a daily basis all work in progress on the ship;
- (e) plan and co-ordinate the movement and storage of hazardous materials;
- (f) review on a daily basis the validity of all permits issued under these Regulations;
- (g) specially monitor all hot-works carried out on the ship and ensure that all safety measures are maintained throughout the period of such work;
- (h) ensure that every confined space is checked for concentrations of oxygen, dangerous gases and flammable vapours —
 - (i) before any person enters into it; and
 - (ii) regularly while work is being carried out,and review the results of such checks;
- (i) ensure that every person is provided with and uses the appropriate personal protective equipment for his work; and
- (j) make arrangements and determine the locations for the display of safety signs and permits on board the ship.

Composition of vessel safety co-ordination committee

12.—(1) It shall be the duty of the person referred to in [regulation 10\(a\)](#) or [\(b\)](#), as the case may be, to ensure that [paragraphs \(2\)](#) to [\(5\)](#) are complied with.

(2) The vessel safety co-ordination committee shall comprise a chairman, a secretary and as many members as may be necessary for the functions of the committee to be effectively carried out.

(3) The ship repair manager shall be the chairman of the vessel safety co-ordination committee.

(4) The workplace safety and health officer or such other person as may be appointed by the ship

repair manager shall be the secretary of the vessel safety co-ordination committee.

(5) The master, owner or agent of the ship or his representative and the supervisors (including the contractor's supervisors) from each trade involved in any work on board the ship shall be members of the vessel safety co-ordination committee.

Frequency of meetings

13.—(1) It shall be the duty of the person referred to in [regulation 10\(a\)](#) or [\(b\)](#), as the case may be, to ensure that the vessel safety co-ordination committee meets daily (including Sundays and public holidays) when any hazardous work is being carried out on the ship and at such other times as the chairman of the vessel safety co-ordination committee may decide.

(2) Unless the chairman of the vessel safety co-ordination committee otherwise decides, it shall be the duty of every member of the vessel safety co-ordination committee to attend such meetings.

Duties of chairman

14.—(1) The chairman of the vessel safety co-ordination committee shall have the following duties:

- (a) to preside at every meeting;
- (b) to decide who are the members required to attend each meeting;
- (c) to ensure that every member who is to attend the meeting is informed in good time of the date, time and venue of the meeting;
- (d) to ensure that the vessel safety co-ordination committee exercises its functions in accordance with this Part; and
- (e) to ensure that every decision made at the meeting is implemented by the relevant member.

(2) A chairman who contravenes [paragraph \(1\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$5,000 and, in the case of a second or subsequent conviction, to a fine not exceeding \$10,000.

Duties of secretary

15.—(1) The secretary of the vessel safety co-ordination committee shall have the following duties:

- (a) to make and keep a record of all matters discussed and decisions made at each meeting of the vessel safety co-ordination committee and extend a copy of such record to every member of the committee;
- (b) to keep a copy of every permit issued under these Regulations; and
- (c) to update the permit co-ordination notice board.

(2) A secretary who contravenes [paragraph \(1\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000 and, in the case of a second or subsequent conviction, to a fine not exceeding \$5,000.

Handing-over procedure for shifts

16.—(1) Where any work is carried out in a shipyard or on board a ship in a harbour in shifts, it shall be the duty of the responsible person to —

- (a) provide a written handing-over procedure to be followed by the supervisor or the foreman of each out-going and in-coming shift, so that the supervisor or foreman of the in-coming shift —
 - (i) will have a comprehensive and accurate knowledge of what occurred during the previous shift; and
 - (ii) is apprised of his and his workers' duties and responsibilities; and
- (b) ensure that the written handing-over procedure referred to in [sub-paragraph \(a\)](#) is followed.

(2) The written handing-over procedure referred to in paragraph (1)(a) shall include the handing over to the supervisor or foreman of the in-coming shift of —

- (a) the activities chart; and
- (b) a copy of the records of the latest vessel safety co-ordination committee meeting.

PART IV

PERMIT-TO-WORK SYSTEM

Application of this Part

17. This Part shall apply only to the following types of work that are carried out in relation to a ship (including a ship under construction) in a shipyard or on board a ship in a harbour (referred to in these Regulations as high-risk works):

- (a) work which involves the use of any hazardous, volatile, corrosive or flammable chemical, material or solvent in significant quantities;
- (b) work involving entry into any confined space;
- (c) spray painting work;
- (d) grit-blasting work carried out in a confined space;
- (e) testing or dismantling of any pipe or equipment that —
 - (i) contains, or had contained, oil or substances that are flammable, toxic or corrosive; or
 - (ii) contains steam;
- (f) ballasting and de-ballasting of a ship;
- (g) repair or maintenance work carried out on the hydraulic system of a ship;
- (h) bunkering and transferring of fuel oil;

- (i) radiography work; and
- (j) such other work as the Commissioner may specify in writing to the occupier of the shipyard or the master, owner or agent of the ship or the employer or principal of the person carrying out the work.

Implementation of permit-to-work

18.—(1) Where any high-risk work is or is to be carried out, it shall be the duty of —

- (a) in the case of a shipyard, the occupier of the shipyard; and
- (b) in the case of a ship in a harbour, the master, owner or agent of the ship,

to —

- (i) implement a permit-to-work system in accordance with this Part; and
 - (ii) appoint a safety assessor (who shall be a workplace safety and health officer or a competent person) in accordance with [paragraph \(3\)](#).
- (2) The permit-to-work system referred to in [paragraph \(1\)](#) shall provide that —
- (a) the high-risk work is carried out with due regard to the safety and health of persons carrying out the work;
 - (b) such persons are informed of the hazards associated with the high-risk work and the precautions they have to take; and
 - (c) the necessary safety precautions are taken and enforced when the high-risk work is being carried out.

(3) It shall be the duty of the person referred to in paragraph (1)(a) or (b), as the case may be, to appoint a person as a safety assessor only if the person is one whom the occupier of the shipyard or the master, owner or agent of the ship, as the case may be, reasonably believes is competent to perform the functions and duties of a safety assessor.

No high-risk work without permit-to-work

19.—(1) Where any high-risk work is or is to be carried out, it shall be the duty of —

- (a) in the case of a shipyard —
 - (i) the occupier of the shipyard;
 - (ii) the employer of any person who carries out the high-risk work; or
 - (iii) the principal under whose direction any person carries out the high-risk work; and
- (b) in the case of a ship in a harbour —
 - (i) the employer of any person who carries out the high-risk work; or
 - (ii) the principal under whose direction any person carries out the high-risk work,

to ensure that no such high-risk work is carried out without a permit-to-work in respect of that high-

risk work first issued by the ship repair manager of the ship to which the high-risk work relates.

(2) Nothing in [paragraph \(1\)](#) shall operate to interfere with or render unlawful any rescue work or other work necessary for the general safety of life or property.

Application for permit-to-work

20. An application for a permit-to-work shall —

- (a) be made by the supervisor or foreman of a person who is to carry out any high-risk work;
- (b) be made in such form and manner as may be required by the ship repair manager of the ship to which the high-risk work relates;
- (c) state the measures which will be taken to ensure the safety and health of persons who carry out the high-risk work; and
- (d) be addressed to the ship repair manager and submitted to the safety assessor of the shipyard or the ship in the harbour where the high-risk work is to be carried out.

Evaluation of permit-to-work

21.—(1) On receipt of the application for a permit-to-work, the safety assessor shall —

- (a) assess whether all reasonably practicable measures have been taken to ensure the safety and health of the persons who will be carrying out the high-risk work; and
- (b) inspect the site (including its surroundings) where the high-risk work is to be carried out together with the supervisor or foreman of the person who is to carry out the work to ensure that the high-risk work can be carried out with due regard to the safety and health of the person or any other person at work in the shipyard or on board the ship in the harbour who may be affected.

(2) If the safety assessor is satisfied that the high-risk work can be carried out with due regard to the safety and health of the person who is to carry out the high-risk work and other persons at work in the shipyard or on board the ship in the harbour who may be affected, he shall endorse the application for the permit-to-work and forward the endorsed application to the ship repair manager.

(3) It shall be the duty of the safety assessor to exercise all due diligence when performing his functions in relation to the evaluation and endorsement of an application for a permit-to-work under [paragraphs \(1\)](#) and [\(2\)](#).

Issue of permit-to-work

22.—(1) The ship repair manager may issue a permit-to-work in relation to any high-risk work if he is satisfied that —

- (a) there has been a proper evaluation of the risks and hazards involved in the carrying out of the high-risk work based on the available information;
- (b) no incompatible work which may pose a risk to the safety and health of the person who is to carry out the high-risk work and other persons at work in the shipyard or on board the ship in the harbour will be carried out at the same time and in the same vicinity as the high-

risk work;

- (c) all reasonably practicable measures will or have been taken to ensure the safety and health of the persons who carry out or are to carry out the high-risk work; and
- (d) all persons who are to carry out the high-risk work are informed of the hazards associated with it.

(2) The ship repair manager who issues a permit-to-work in respect of any high-risk work shall retain a copy of the permit-to-work.

(3) It shall be the duty of the ship repair manager to exercise all due diligence when performing his function in relation to the issuance of a permit-to-work under [paragraph \(1\)](#).

(4) Subject to [regulation 26](#), a permit-to-work shall be valid for the period stated therein, and if the high-risk work for which the permit-to-work is issued is not completed within the validity period, a fresh application shall be made in accordance with [regulation 20](#).

Posting of permit-to-work

23. It shall be the duty of the supervisor or foreman of any person who carries out any high-risk work —

- (a) to clearly post a copy of the permit-to-work issued in respect of that high-risk work, including where reasonably practicable, a sketch of any area where the high-risk work is permitted, at the work area where the work is carried out; and
- (b) to ensure that the copy is not removed until the date of expiry or date of revocation of the permit-to-work or on completion of the high-risk work, whichever is the earlier.

Monitoring of high-risk work

24.—(1) It shall be the duty of the ship repair manager to continually review the progress of all high-risk work carried out pursuant to any permit-to-work issued in relation to any ship of which he is the ship repair manager to ensure that the high-risk work is carried out with due regard to the safety and health of the persons carrying out the high-risk work.

(2) It shall be the duty of the supervisor or foreman of any person who carries out any high-risk work —

- (a) to ensure that the measures necessary to ensure the safety and health of the person at work are taken and are in place at all times during the validity period of the permit-to-work; and
- (b) to inform the ship repair manager upon completion of the high-risk work.

Duty to report incompatible work

25.—(1) It shall be the duty of any person who is aware of any work being carried out in a shipyard or on board a ship in a harbour which is incompatible with any high-risk work being carried out thereat to immediately report the incompatible work to his supervisor, the workplace safety and health officer, the workplace safety and health co-ordinator or the ship repair manager who issued the permit-to-work in respect of that high-risk work.

(2) In [paragraph \(1\)](#), any work in a shipyard or on board a ship in a harbour which is carried out at or in the vicinity of any high-risk work and which is likely to pose a risk to the safety or health of persons at work in the shipyard or on board the ship in the harbour shall be treated as incompatible work.

Revocation of permit-to-work

26. If, after issuing a permit-to-work in respect of any high-risk work, the ship repair manager is of the view that the carrying out of the high-risk work poses or is likely to pose a risk to the safety and health of persons at work in the shipyard or on board the ship in the harbour, he may order the high-risk work to cease immediately and revoke the permit-to-work.

PART V

HOT-WORK PERMIT SYSTEM

Implementation of hot-work permit

27.—(1) Where any hot-work is or is to be carried out in relation to a ship (including a ship under construction) in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) in the case of a shipyard, the occupier of the shipyard; and
- (b) in the case of a ship in a harbour, the master, owner or agent of the ship,

to —

- (i) implement a hot-work permit system in accordance with this Part; and
- (ii) appoint a safety assessor (who shall be a workplace safety and health officer or a competent person) in accordance with [paragraph \(3\)](#).

(2) The hot-work permit system referred to in [paragraph \(1\)](#) shall provide that —

- (a) the hot-work is carried out with due regard to the safety and health of persons carrying out the hot-work;
- (b) such persons are informed of the hazards associated with the hot-work and the precautions they have to take; and
- (c) the necessary safety precautions are taken and enforced when the hot-work is being carried out.

(3) It shall be the duty of the person referred to in paragraph (1)(a) or (b), as the case may be, to appoint a person as a safety assessor only if the person is one whom the occupier of the shipyard or the master, owner or agent of the ship, as the case may be, reasonably believes is competent to perform the functions and duties of a safety assessor.

No hot-work without hot-work permit

28.—(1) Where any hot-work is or is to be carried out in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) in the case of a shipyard —
 - (i) the occupier of the shipyard;
 - (ii) the employer of any person who carries out the hot-work; or
 - (iii) the principal under whose direction any person carries out the hot-work; and
- (b) in the case of a ship in a harbour —
 - (i) the employer of any person who carries out the hot-work; or
 - (ii) the principal under whose direction any person carries out the hot-work,

to ensure that no such hot-work is carried out without a hot-work permit in respect of that hot-work first issued by the ship repair manager of the ship to which the hot-work relates.

(2) Nothing in [paragraph \(1\)](#) shall operate to interfere with or render unlawful any rescue work or other work necessary for the general safety of life or property.

Application for hot-work permit

29.—(1) An application for a hot-work permit shall —

- (a) be made by the supervisor or foreman of a person who is to carry out any hot-work;
- (b) be made in such form and manner as may be required by the ship repair manager of the ship to which the hot-work relates;
- (c) state the measures which will be taken to ensure the safety and health of persons who carry out the hot-work; and
- (d) be addressed to the ship repair manager and submitted to the safety assessor of the shipyard or the ship in the harbour where the hot-work is to be carried out.

(2) Every application for a hot-work permit shall be accompanied by sketches showing the exact locations where the hot-work is to be carried out.

Evaluation of hot-work permit

30.—(1) On receipt of the application for a hot-work permit, the safety assessor shall —

- (a) assess whether all reasonably practicable measures have been taken to ensure the safety and health of the persons who will be carrying out the hot-work; and
- (b) inspect the site (including its surroundings) where the hot-work is to be carried out together with the supervisor or foreman of the person who is to carry out the work to ensure that the hot-work can be carried out with due regard to the safety and health of the person or any other person at work in the shipyard or on board the ship in the harbour who may be affected.

(2) If the safety assessor is satisfied that the hot-work can be carried out with due regard to the safety and health of the person who is to carry out the hot-work and other persons at work in the shipyard or on board the ship in the harbour who may be affected, he shall endorse the application for the hot-work permit and forward the endorsed application to the ship repair manager.

(3) It shall be the duty of the safety assessor to exercise all due diligence when performing his functions in relation to the evaluation and endorsement of an application for a hot-work permit under [paragraphs \(1\) and \(2\)](#).

Issue of hot-work permit

31.—(1) The ship repair manager may issue a hot-work permit in relation to any hot-work if he is satisfied that —

- (a) it is necessary to carry out the hot-work;
- (b) there is no alternative work method to the hot-work;
- (c) there has been a proper evaluation of the risks and hazards involved in the carrying out of the hot-work based on the available information;
- (d) no incompatible work which may pose a risk to the safety and health of the person who is to carry out the hot-work and other persons at work in the shipyard or on board the ship in the harbour will be carried out at the same time and in the same vicinity as the hot-work;
- (e) all reasonably practicable measures will or have been taken to ensure the safety and health of the persons who carry out or are to carry out the hot-work; and
- (f) all persons who are to carry out the hot-work are informed of the hazards associated with it.

(2) The hot-work permit shall be a controlled document and shall be serialised.

(3) The ship repair manager who issues a hot-work permit in respect of any hot-work shall retain a copy of the hot-work permit.

(4) It shall be the duty of the ship repair manager to exercise all due diligence when performing his function in relation to the issuance of a hot-work permit under [paragraph \(1\)](#).

(5) Subject to [regulation 37](#), a hot-work permit shall be valid for the period stated therein, and if the hot-work for which the hot-work permit is issued is not completed within the validity period, a fresh application shall be made in accordance with [regulation 29](#).

(6) Regulations 23 and 24 shall apply, with the necessary modifications, in respect of a hot-work permit as they apply in respect of a permit-to-work.

Person carrying out hot-work to be competent in hot-work

32. Where any hot-work is to be carried out in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) the employer of any person who carries out or is to carry out the hot-work; or
- (b) the principal under whose direction any person who carries out or is to carry out the hot-work, to ensure that the person —
 - (i) has received sufficient training and is competent in hot-work; and
 - (ii) has been fully instructed as to the danger likely to arise in connection with such

work and the precautionary measures to be taken.

Measures for hot-work

33. Where any hot-work is to be carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person, before the issue of a hot-work permit, to —

- (a) ensure that the site of the intended hot-work and its surrounding areas are free from any hazardous substance; and
- (b) if necessary to prevent danger from the opposite side of the surface on which the hot-work is to be carried out, keep watch for any fire and prevent the introduction of any hazardous substance.

Marking of hot-work area

34. Where any hot-work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that the site where any hot-work is to be carried out is clearly marked for easy identification.

Fire watchman

35.—(1) Where any hot-work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that a person who has been trained in fire fighting is appointed as a fire watchman.

(2) It shall be the duty of the responsible person to ensure that the fire watchman is provided with suitable and adequate fire fighting equipment.

(3) It shall be the duty of the fire watchman —

- (a) to keep watch over the area in which the hot-work is being carried out and the surroundings thereof for any fire throughout the duration of the hot-work; and
- (b) in the event of a fire breaking out, to extinguish or control the fire if it is within his means to do so and if not, to immediately report the fire to the Singapore Civil Defence Force.

Duty to report incompatible work

36.—(1) It shall be the duty of any person who is aware of any work being carried out in a shipyard or on board a ship in a harbour which is incompatible with any hot-work being carried out thereat to immediately report the incompatible work to his supervisor, the workplace safety and health officer, the workplace safety and health co-ordinator or the ship repair manager who issued the hot-work permit in respect of that hot-work.

(2) In [paragraph \(1\)](#), any work in a shipyard or on board a ship in a harbour which is carried out at or in the vicinity of any hot-work and which is likely to pose a risk to the safety or health of persons at work in the shipyard or on board the ship in the harbour shall be treated as incompatible work.

Daily review and revocation of hot-work permit

37.—(1) It shall be the duty of the ship repair manager to review and assess the need to continue

the hot-work on a daily basis and revoke the hot-work permit if he thinks fit to do so.

(2) If, after issuing a hot-work permit in respect of any hot-work, the ship repair manager is of the view that the carrying out of the hot-work poses or is likely to pose a risk to the safety and health of persons at work in the shipyard or on board the ship in the harbour, he may order the hot-work to cease immediately and revoke the hot-work permit.

PART VI

GENERAL PROVISIONS

Safety of equipment

38. Where any person uses any equipment in a shipyard or on board a ship in a harbour for the purpose of any work to which these Regulations apply, it shall be the duty of —

- (a) the employer of the person; or
- (b) the principal under whose direction the person carries out the work,

to ensure that the equipment is —

- (i) of good construction, sound material and adequate strength;
- (ii) free from defects; and
- (iii) appropriate for the work for which it is to be used.

Approval of hazardous substances

39.—(1) It shall be the duty of any person bringing any hazardous substance into a shipyard or on board a ship in a harbour to obtain approval for him to do so from —

- (a) in the case of a shipyard, the occupier of the shipyard; and
- (b) in the case of a ship in a harbour, the master, owner or agent of the ship.

(2) In [paragraph \(1\)](#), "hazardous substance" means any hazardous substance specified in [Part II of the Fifth Schedule to the Act](#).

Falling hazards

40.—(1) Where, in a shipyard or on board a ship in a harbour, there is any open side or opening into or through which any person is liable to fall more than 2 metres, it shall be the duty of the responsible person to take, so far as is reasonably practicable, such measures as are necessary to comply with [paragraphs \(2\), \(3\)](#) and (5).

(2) Subject to [paragraph \(4\)](#), every open side or opening referred to in [paragraph \(1\)](#) shall be covered or guarded by effective guard-rails, barriers or other equally effective means to prevent fall.

(3) Every guard-rail, barrier or other equally effective means of fall prevention referred to in [paragraph \(2\)](#) shall —

- (a) be of good construction, sound material and adequate strength to withstand the impact

during the course of work;

- (b) be placed on the inside of the uprights and secured so as to prevent accidental displacement; and
- (c) be placed so as to prevent the fall of any person.

(4) Every guard-rail, barrier or other equally effective means of fall prevention referred to in [paragraph \(2\)](#) may be removed where free access is required or work is actually in progress.

(5) Every guard-rail, barrier or other equally effective means of fall prevention referred to in [paragraph \(2\)](#) which is removed under [paragraph \(4\)](#) shall be reinstated or replaced immediately when free access is no longer required or work is no longer in progress.

Drowning hazards

41. Where any person carries out work in a shipyard or on board a ship in a harbour which may expose him to the risk of falling into water in which he may drown, it shall be the duty of the responsible person to ensure that the person is provided, at all times during the exposure to the risk, with adequate equipment —

- (a) for keeping persons afloat;
- (b) for promptly rescuing persons from the water; and
- (c) for resuscitating rescued persons.

Slipping hazards

42. Where any work is carried out by any person in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that any passageway, scaffold, platform or other elevated working surface to be used by the person carrying out the work is kept free from slipping hazard.

Hazards arising from protruding objects

43. Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that —

- (a) all passageways, stairs, platforms and other means of access or places of work are kept free from debris or protruding objects or any other obstructions that could cause tripping; and
- (b) any sharp projection which is present in any passageway, stair, platform and other means of access or place of work and which may injure any person is removed or otherwise made safe.

Prevention of accidental closure of hatch

44. Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that if any cover of a hatch opening is in the open position, effective means is provided to prevent accidental closure of the cover.

Spray painting

45.—(1) Where spray painting work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) the employer of any person who carries out the spray painting work in a shipyard or on board a ship in a harbour; or
- (b) the principal under whose direction any person carries out the spray painting work,

to comply with [paragraphs \(2\), \(3\) and \(5\)](#).

(2) Suitable and effective breathing apparatus for spray painting works shall be provided to every person employed in spray painting work.

(3) Every breathing apparatus so provided shall be —

- (a) of good construction and sound material;
- (b) free from defects; and
- (c) in accordance with the generally accepted principles of sound and safe practice,

and shall be so maintained.

(4) Every person undertaking spray painting work in any tank, compartment or confined space shall use a suitable breathing apparatus of a type where fresh air is being constantly supplied by an air-line.

(5) Any area or place where spray painting works are being carried out shall be adequately ventilated.

(6) Any person who contravenes [paragraph \(4\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000 and, in the case of a second or subsequent conviction, to a fine not exceeding \$2,000.

Vehicular hazards

46.—(1) It shall be the duty of the owner of any vehicle used in a shipyard to ensure that the vehicle is of good construction and is roadworthy.

(2) No person shall drive a vehicle of any class or description in a shipyard unless he has obtained the authorisation of the occupier of the shipyard to do so.

(3) It shall be the duty of the occupier of a shipyard to ensure that no person, except a person who has obtained the authorisation referred to in [paragraph \(2\)](#), drives a vehicle of any class or description in a shipyard.

(4) Where any person drives any vehicle in a shipyard, it shall be the duty of —

- (a) the employer of the person who drives the vehicle; or
- (b) the principal under whose direction the person drives the vehicle,

to ensure that the person does not drive the vehicle unless the person —

- (i) has been fully instructed as to the dangers likely to arise in connection therewith and the precautions to be observed; and
- (ii) has received sufficient training to drive the vehicle.

(5) Any person who contravenes [paragraph \(2\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000 and, in the case of a second or subsequent conviction, to a fine not exceeding \$2,000.

Lighting

47. Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that there is —

- (a) sufficient and suitable general lighting, whether natural or artificial, in every part of the shipyard or ship in the harbour in which persons are at work or passing; and
- (b) emergency lighting for use in the event of a power failure affecting the general lighting, which is sufficient in intensity and distribution to allow for the safe evacuation or rescue of persons in the shipyard or ship in the harbour.

Disposal of debris

48. Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that —

- (a) the handling and disposal of any debris or other article is done in a manner which will not endanger persons;
- (b) no debris is allowed to accumulate so as to constitute a hazard; and
- (c) no debris is thrown from heights.

Prohibition on smoking

49.—(1) Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that no person smokes in any place other than a designated smoking area.

(2) It shall be the duty of any person in a shipyard or on board a ship in a harbour not to smoke in any place other than a designated smoking area.

Safety signs

50. Where any work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to provide appropriate safety signs placed at appropriate and suitable locations.

Emergency exits

51.—(1) Where any work is carried out on board a ship in a shipyard or in a harbour, it shall be the duty of the responsible person to ensure that every person reporting for work on board the ship is

given a briefing by his supervisor on the safe conduct of work and the means of escape and exits in the area of his work.

(2) It shall be the duty of the supervisor to ensure that the briefings are properly conducted.

Personal protective equipment

52.—(1) Where any work is carried out in a shipyard or on board a ship in a harbour which requires any protection referred to in [paragraph \(2\)](#), it shall be the duty of —

- (a) the employer of any person who carries out the work; or
- (b) the principal under whose direction any person carries out the work,

to provide and maintain, so far as is reasonably practicable, personal protective equipment to the persons.

(2) The protection referred to in [paragraph \(1\)](#) is as follows:

- (a) eye protection;
- (b) fall protection;
- (c) foot protection;
- (d) hand protection;
- (e) head protection;
- (f) hearing protection; and
- (g) respiratory protection.

PART VII

ELECTRICAL SAFETY

Electrical installations, equipment and connections

53.—(1) Where any work is carried out in a shipyard or on board a ship in a harbour in the course of which the person carrying out the work may come into contact with any part of an electrical installation or equipment, including motor generators, rectifiers, welding machines or welding sets, it shall be the duty of the responsible person to comply with [paragraphs \(2\)](#) to [\(7\)](#).

(2) All electrical installations and equipment, including motor generators, rectifiers, welding machines or welding sets, shall be —

- (a) of good construction and sound material;
- (b) free from defects; and
- (c) in accordance with the generally accepted principles of sound and safe practice,

and shall be so maintained.

(3) All practical measures shall be taken to protect any person against the risk of electric shock

arising from or in connection with the use of any electrical installation or equipment.

(4) All electrical connections shall be in accordance with the generally accepted principles of sound and safe practice.

(5) Plugs and socket-outlets used for connecting any electrical equipment shall be of heavy duty industrial types.

(6) Any portable hand-held electrical equipment used in any confined space shall be operated at a voltage not exceeding alternating current (AC) 55 volts between the conductor and earth or direct current (DC) 120 volts.

(7) All temporary electrical installations supplying electricity to any portable electrical equipment shall be protected by effective residual current circuit breakers with a tripping current not exceeding 30 mA.

Electrical welding equipment

54.—(1) It shall be the duty of any person who provides any alternating current (AC) electric arc welding equipment for use in a shipyard or on board a ship in a harbour to comply with [paragraphs \(2\)](#) and [\(3\)](#).

(2) All alternating current (AC) electric arc welding equipment for use in a shipyard or on board a ship in a harbour shall be fitted with an effective low voltage shock preventor which reduces the open-circuit secondary voltage to not exceeding 25 volts.

(3) The low voltage shock preventor referred to in [paragraph \(2\)](#) shall be —

- (a) fitted in accordance with the manufacturer's instructions; and
- (b) inspected and tested by a competent person once every 6 months.

PART VIII

WELDING AND CUTTING OPERATIONS

Gas cylinders

55.—(1) Where any welding or cutting work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\)](#) and [\(3\)](#).

(2) No cylinder which contains or has contained oxygen or any flammable gas or vapour shall be taken —

- (a) below the weather deck of a ship undergoing repair; or
- (b) below the topmost completed deck of a ship under construction,

unless it is installed or placed in a part of the ship which is adequately ventilated to prevent any dangerous accumulation of gases.

(3) Subject to [paragraph \(4\)](#), no liquefied petroleum gas (LPG) shall be taken and used —

- (a) on board a ship undergoing repair; or

(b) below the topmost completed deck of a ship under construction,

unless all gas outlets have been fitted with effective anti-leakage devices.

(4) [Paragraph \(3\)](#) shall not apply to any LPG brought on board a ship by the master for the purpose of maintaining and running of the ship.

Gas manifolds

56. It shall be the duty of the occupier of a shipyard to ensure that all gas manifolds in the shipyard are clearly marked to indicate the substance they contain and are sited in a safe and accessible location in open air.

Pipe lines and gas hoses

57. Where any work involving the cutting, welding or heating of metal is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that all pipes and hoses for the supply of oxygen or any flammable gas or vapour to any apparatus for cutting, welding or heating of metal are —

- (a) of good construction and sound material;
- (b) free from defects; and
- (c) properly maintained.

Gas equipment to be of good construction, etc.

58. Where any hot-work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that all equipment used for the purpose of carrying out hot-works, including any apparatuses, gas torches, blowpipes, pressure regulators, nozzles and connections, are —

- (a) of a design that is suitable for the gas or vapour being used;
- (b) of good construction and sound and suitable material;
- (c) free from defects; and
- (d) properly maintained.

Safety devices

59.—(1) Where any work involving oxy-fuel and air-fuel gas equipment is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) A suitable non-return valve or any other equally effective means which prevents the backflow of gas shall be fitted in accordance with the manufacturer's instructions between each gas torch inlet and gas hose of every oxy-fuel and air-fuel gas equipment.

(3) A flashback arrestor or any other equally effective means which stops flashbacks shall be fitted in accordance with the manufacturer's instructions at every —

- (a) fuel gas and oxygen outlet; and
- (b) pressure regulator outlet of each gas cylinder.

(4) An anti-leakage device or other equally effective means to stop a leak shall be provided on every oxygen and fuel gas line used in a confined space.

Safety measures during break in gas welding and cutting

60.—(1) Where any work involving welding or cutting is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) Where welding and cutting operations cease for the day or for a substantial period or during a meal interval —

- (a) the supply valves of every gas cylinder and manifold shall be securely closed; and
- (b) every gas torch, manifold and hose for flammable gases and oxidizing gases shall be taken to the weather deck in the case of a ship undergoing repair or the topmost completed deck in the case of a ship under construction or, in either case, to a safe place that is adequately ventilated to prevent any dangerous accumulation of gases or vapours.

(3) Where it is impractical to comply with the requirements in paragraph (2)(b) during a meal interval, effective measures shall be taken to ensure that the work area is safe before work resumes.

(4) The measures referred to in [paragraph \(3\)](#) shall include —

- (a) the provision of effective ventilation to prevent the accumulation of gases in the shipyard or on board the ship in the harbour; and
- (b) the testing of the atmosphere for the presence of flammable gases.

Inspection of hot-work equipment

61.—(1) Where any hot-work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) All electrode holders, welding cables, cable connectors and other arc welding equipment shall be inspected by a competent person once every 30 days.

(3) All equipment and fittings used for the purpose of carrying out hot-work, including any gas hoses, torches, blowpipes, pressure regulators, nozzles and connections, shall be inspected and tested by a competent person or a workplace safety and health officer once every 14 days to ensure that they are free from defects and leaks.

(4) All safety devices referred to in [regulation 59](#) shall be inspected and tested by a competent person or a workplace safety and health officer once every 12 months to ensure that they are effective.

(5) It shall be the duty of the competent person, or the workplace safety and health officer, as the case may be, to —

- (a) enter the results of the inspection and test into a register;

- (b) keep the register of the inspection and test at the shipyard or on board the ship in the harbour; and
- (c) produce the register for inspection upon request by an inspector.

(6) Any competent person or workplace safety and health officer who fails to comply with [paragraph \(5\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000.

No welding in wet conditions

62.—(1) Where any electric arc welding work is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that, so far as is reasonably practicable, no electric arc welding work is carried out under wet conditions where there is risk of electrocution.

(2) No person shall carry out any electric arc welding in wet conditions where there is risk of electrocution.

(3) No person shall require, permit or direct any person to carry out electric arc welding in wet conditions where there is risk of electrocution.

(4) Any person who contravenes [paragraph \(2\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000.

(5) Any person who contravenes [paragraph \(3\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 2 years or to both.

Adequate ventilation

63.—(1) Where any heating, welding, cutting or any other work involving the application of heat is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) Where the heating, welding, cutting or other work involving the application of heat is to be carried out in a confined space, adequate ventilation shall be provided.

(3) When the heating, welding, cutting or other work involving the application of heat is to be carried out on materials containing lead, cadmium, beryllium, copper or other toxic or harmful substances, effective local exhaust ventilation shall be provided to remove any toxic or harmful fumes or other air impurities at the source of emission.

(4) Where the provision of ventilation under [paragraphs \(2\) and \(3\)](#) is not practicable, breathing apparatus of the type where fresh air is being constantly supplied by an air-line or other equally suitable breathing apparatus shall be provided to the person carrying out the work.

Metallic fumes

64.—(1) Where any heating, welding, cutting or any other work involving the application of heat is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) All welding, cutting or other works involving the application of heat shall, so far as is reasonably practicable, be carried out in open air or in areas with good ventilation.

(3) Where any work referred to in [paragraph \(2\)](#) cannot be carried out in an area with good ventilation, effective local exhaust ventilation shall be provided to remove any toxic or harmful fumes or other air impurities at the source of emission.

(4) Where the provision of local exhaust ventilation is not practicable under [paragraph \(3\)](#) —

- (a) forced ventilation shall be used to dilute any toxic or harmful fumes or other air impurities; and
- (b) breathing apparatus of the type where fresh air is being constantly supplied by an air-line or other equally suitable breathing apparatus shall be provided to and used by the person carrying out the work.

Welding and cutting on containers that held flammable substances

65. Where any operation involving welding or cutting is carried out in a shipyard or on board a ship in a harbour on any container that has held any explosive or flammable substance or in which flammable gases may have been generated, it shall be the duty of —

- (a) the employer of any person who carries out the operation; or
- (b) the principal under whose direction any person carries out the operation,

to ensure that no such operation is carried out on the container unless —

- (i) the container has been thoroughly cleaned by steam or other equally effective means and is completely free from combustible gases or vapours; or
- (ii) the atmosphere in the container has been rendered non-flammable or non-explosive.

PART IX

CRANES, EMPLOYEE'S LIFTS AND MATERIAL HANDLING MACHINERY

Strength and stability

66.—(1) It shall be the duty of the owner of a crane, an employee's lift or a material handling machinery being used in a shipyard or on board a ship in a harbour to ensure that it is —

- (a) of good construction, sound material and adequate strength;
- (b) free from defects; and
- (c) properly maintained.

(2) It shall be the duty of the operator of a crane or material handling machinery being used in a shipyard or on board a ship in a harbour to ensure that the crane or machinery, as the case may be, is positioned and operated so as to be stable.

Capacity chart

67.—(1) It shall be the duty of the owner of any crane used in a shipyard or on board a ship in a harbour to comply with [paragraphs \(2\), \(3\) and \(4\)](#).

(2) Where the capacity of the crane is variable, a capacity chart shall be provided.

(3) The capacity chart shall —

- (a) be posted and maintained in the crane which is clearly visible to the operator;
- (b) set out the safe loads for various lengths of jib at various angles and radial distances; and
- (c) be prepared and certified by an authorised examiner, unless it is furnished by the manufacturer or builder of the crane.

(4) Where outriggers are provided, the safe loads with and without the use of outriggers shall be specified in the capacity chart.

Thorough examination and inspection

68. Where any work involving lifting operations is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to ensure that, before any crane, employee's lift or material handling machinery is put into service for the first time in the shipyard or on board the ship in the harbour —

- (a) it has been thoroughly examined and inspected by a competent person; and
- (b) in the case of a crane or an employee's lift, such examination and inspection is conducted by an authorised examiner.

Handling of suspended loads

69.—(1) Where any crane or material handling machinery is used in a shipyard or on board a ship in a harbour, it shall be the duty of the operator of the crane or material handling machinery to take, so far as is reasonably practicable, such measures as are necessary to ensure that a suspended load is not moved over the head of any person.

(2) Where any work involving lifting operations is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) the employer of any person who carries out the work; or
- (b) the principal under whose direction any person carries out the work,

to ensure that loads that have a tendency to swing or turn freely during hoisting are controlled by tag-lines.

Prohibition of riding on loads

70.—(1) Where any work involving the use of any crane, hoisting machinery, material handling machinery or excavating machinery is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of the responsible person to comply with [paragraph \(3\)](#) and ensure that no person rides on the loads, buckets, skips, cars, slings or hooks of the crane or machinery.

(2) [Paragraph \(1\)](#) shall not apply to lifting cages specially designed to hold persons while it is suspended from a crane.

(3) The use of every lifting cage shall be in accordance with the requirements on lifting gears in the [Workplace Safety and Health \(General Provisions\) Regulations](#) (Rg 1) and the requirements of any approved code of practice.

Cranes or machinery at rest

71. Where any work involving the use of a crane or material handling machinery is carried out in a shipyard or on board a ship in a harbour, it shall be the duty of —

- (a) the employer of any person who carries out the work; or
- (b) the principal under whose direction any person carries out the work,

to ensure that no load is left suspended on the crane or material handling machinery when it is not in use.

Operator of employee's lift

72.—(1) It shall be the duty of the occupier of a shipyard to ensure that —

- (a) no employee's lift in the shipyard is operated unless it is in the charge of a designated person stationed in the car as its attendant; and
- (b) no person other than the lift car attendant moves the car of the employee's lift or opens the car door or gate of the employee's lift.

(2) It shall be the duty of the lift car attendant —

- (a) not to cause the lift car to move unless he is satisfied that the load is prepared for movement; and
- (b) to exercise all due diligence when operating the employee's lift.

System for calling lifts

73. It shall be the duty of the occupier of a shipyard to ensure that a system for calling a lift car to every landing level where workers are required to board or alight from the lift car is implemented in the shipyard.

PART X

MISCELLANEOUS

Offence

74. Any person who contravenes any provision of these Regulations which imposes a duty on him shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 2 years or to both.

Revocation

75. The Factories (Shipbuilding and Ship-repairing) Regulations (Cap. 104, Rg 11) are revoked.

Made this 21st day of May 2008.

LEO YIP
*Permanent Secretary,
Ministry of Manpower,
Singapore.*

[C 010-034; AG/LEG/SL/354A/2006/3 Vol. 2]

(To be presented to Parliament under [section 65\(8\) of the Workplace Safety and Health Act](#)).