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No. S 515

**WORKPLACE SAFETY AND HEALTH ACT
(CHAPTER 354A)**

**WORKPLACE SAFETY AND HEALTH
(OPERATION OF CRANES)
REGULATIONS 2011**

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In exercise of the powers conferred by section 65 of the Workplace Safety and Health Act, the Minister for Manpower hereby makes the following Regulations:

PART I

PRELIMINARY

Citation and commencement

1.—(1) These Regulations may be cited as the Workplace Safety and Health (Operation of Cranes) Regulations 2011 and shall, with the exception of regulation 5(4) and (5), come into operation on 10th September 2011.

(2) Regulation 5(4) and (5) shall come into operation on 1st September 2013.

Definitions

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

“approved crane contractor” means any firm or company which is the holder of a valid certificate of approval issued by the Commissioner under regulation 22;

“crane” means a machine incorporating an elevated structural member or jib beneath which suspended loads may be moved vertically (whether upwards or downwards) or horizontally or both, either by slewing the machine or derricking the jib, or by any other means not solely involving a travelling motion of the crane;

“lorry loader” means a lorry incorporating an articulator arm mounted on the lorry which is used for loading, unloading and lifting of materials or goods;

“mobile crane” means a crane mounted on a truck, crawler or on wheels and includes any crane of a type shown in the First Schedule;

“registered crane operator” means any person who is the holder of a valid certificate of registration issued by the Commissioner under regulation 6;

“responsible person”, in relation to a workplace where a crane is, or is to be, operated by a person means —

- (a) the employer of the person; or
- (b) the principal under whose direction the person operates the crane;

“tower crane” means a crane which has a vertical or near vertical tower designed to be free standing up to a height specified by the Commissioner and includes any crane of a type shown in the Second Schedule.

Application

3. These Regulations shall apply to any workplace in which a crane is in use.

PART II

GENERAL PROVISIONS

Lifting plan

4.—(1) Where any lifting operation involving the use of any crane is carried out in a workplace by a crane operator, it shall be the duty of the responsible person to establish and implement a lifting plan which shall be in accordance with the generally accepted principles of safe and sound practice.

(2) It shall be the duty of the responsible person to ensure that the lifting plan referred to in paragraph (1) is made available for inspection upon request by an inspector.

Only registered crane operator to operate a mobile crane and tower crane

5.—(1) No person shall operate a mobile crane (not being a lorry loader) or tower crane in a workplace unless he is a registered crane operator.

(2) It shall be the duty of the responsible person to ensure that no person, other than a registered crane operator, is employed, permitted or made to operate a mobile crane (not being a lorry loader) or tower crane in a workplace.

(3) A person, whether or not he is also a registered crane operator, may drive a mobile crane in a workplace if he is the holder of a driving licence issued under the Road Traffic Act (Cap. 276) authorising him to drive a mobile crane of a class or description permitted by the licence, but he shall not operate the mobile crane unless he also satisfies the requirement referred to in paragraph (1).

(4) No person shall operate a lorry loader unless —

- (a) he has successfully completed a training course, acceptable to the Commissioner, on the operation of a lorry loader;
- (b) if required by the Commissioner, he attends re-training on the operation of a lorry loader and successfully completes such re-training; and
- (c) if required by the Commissioner, he produces a current medical certificate from a registered medical practitioner certifying that he is medically fit to operate a lorry loader.

(5) It shall be the duty of the responsible person to ensure that no person is allowed to operate a lorry loader unless the person satisfies the requirements referred to in paragraph (4).

PART III

REGISTRATION OF CRANE OPERATORS

Application for registration to be crane operator

6.—(1) A person may apply to the Commissioner for his approval to register as a crane operator.

(2) An application under paragraph (1) shall be —

- (a) in such form and manner as the Commissioner may determine; and
- (b) accompanied by the appropriate fee specified in the Third Schedule and such fee shall not be refundable.

(3) Upon receiving an application under paragraph (1), the Commissioner may, subject to regulation 7 —

- (a) issue the person with a certificate of registration to act as a crane operator subject to such conditions as the Commissioner may think fit to impose; or
- (b) refuse to approve the application.

Requirements for registration as crane operator

7.—(1) A person may register as a crane operator if he satisfies the Commissioner that —

- (a) he has successfully completed a training course acceptable to the Commissioner on the operation of a mobile crane or tower crane;
- (b) he has, in the opinion of the Commissioner, sufficient experience in operating a mobile crane or tower crane and has passed a proficiency test acceptable to the Commissioner; or
- (c) he possesses any other equivalent qualification acceptable to the Commissioner.

(2) The Commissioner may require an applicant to produce a current medical certificate from a registered medical practitioner which certifies that the applicant is medically fit to operate a mobile crane or tower crane.

(3) The Commissioner shall not register an applicant who has been certified by a registered medical practitioner to be unfit to operate a mobile crane or tower crane.

Certificate of registration

8.—(1) A certificate of registration to act as a crane operator shall, unless the registration is earlier cancelled, be valid for a period of 2 years from the date of registration or for such shorter period as the Commissioner may specify in the certificate of registration.

(2) A certificate of registration shall not be transferable.

(3) Where a certificate of registration is lost, destroyed or defaced, the holder of the certificate may apply to the Commissioner for a replacement certificate on payment of the appropriate fee specified in the Third Schedule.

(4) An application under paragraph (3) to the Commissioner shall be supported by such documentary proof that the certificate of registration issued earlier is lost, destroyed or defaced.

Register of crane operators

9. The Commissioner shall keep an up-to-date register of all persons registered as crane operators.

Production of certificate of registration upon request

10.—(1) It shall be the duty of a registered crane operator to produce his certificate of registration for inspection upon request by an inspector.

(2) Any person who contravenes paragraph (1) 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.

Renewal of registration

11.—(1) An application by a person for the renewal of his certificate of registration to act as a crane operator shall be made in such form and manner as the Commissioner may determine, and shall be accompanied by the appropriate fee specified in the Third Schedule.

(2) Any renewal fee paid under paragraph (1) shall not be refundable.

(3) Upon receiving an application for the renewal of registration under paragraph (1), the Commissioner may —

- (a) renew the certificate of registration to act as a crane operator for a period of 2 years or for such shorter period as the Commissioner may specify in the certificate of registration; or
- (b) refuse the application for renewal if the Commissioner is satisfied that the applicant is no longer a fit and proper person to be registered as a crane operator.

Conditions for renewal of registration as crane operator

12.—(1) The Commissioner may impose such conditions for the renewal of registration as a crane operator as he thinks fit.

(2) The conditions referred to in paragraph (1) may include any one or all of the following:

- (a) requiring an applicant to attend a refresher course acceptable to the Commissioner on the operation of a mobile crane or a tower crane;
- (b) requiring an applicant to pass a proficiency test acceptable to the Commissioner for crane operation;

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- (c) requiring an applicant to produce a current medical certificate from a registered medical practitioner which certifies that the applicant is medically fit to operate a mobile crane or tower crane.

Suspension and cancellation of registration

13.—(1) The Commissioner may suspend or cancel the registration of any registered crane operator if the Commissioner is satisfied that the registered crane operator —

- (a) has obtained his registration under these Regulations by means of fraud, false representation or the concealment of any material fact;
- (b) has been certified by a registered medical practitioner to be unfit to operate a mobile crane or a tower crane; or
- (c) has failed to comply with any of the duties set out in these Regulations.

(2) It shall be the duty of a registered crane operator upon becoming aware of any medical condition which may render him unfit to operate a mobile crane or a tower crane to inform the Commissioner of such medical condition without undue delay.

(3) 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.

Notice of suspension and cancellation of registration

14.—(1) When the Commissioner has suspended or cancelled the registration of a registered crane operator under regulation 13, the Commissioner shall inform the registered crane operator concerned by notice in writing of such suspension or cancellation.

(2) The suspension or cancellation shall take effect 21 days after the date of the service of the notice on the registered crane operator or, if an appeal against the suspension or cancellation of registration has been made to the Minister under paragraph (4), on the date the Minister dismisses the appeal.

(3) Notwithstanding that the suspension or cancellation has not taken effect, any registered crane operator whose registration is suspended or cancelled by the Commissioner shall not, between the

date of the service of the notice of suspension or cancellation and the date the suspension or cancellation takes effect (both dates inclusive), operate a mobile crane (not being a lorry loader) or a tower crane.

(4) A registered crane operator whose registration has been suspended or cancelled by the Commissioner under regulation 13 may, within 21 days of the date of the service of the notice of suspension or cancellation, appeal to the Minister whose decision shall be final.

(5) The notice of suspension or cancellation may be served on any person by delivering it to him, or by leaving it at, or sending it by registered post to, his last known residential address.

Surrender of certificate

15.—(1) A registered crane operator shall immediately surrender to the Commissioner his certificate of registration when the suspension or cancellation takes effect in accordance with regulation 14(2).

(2) Any person who contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$5,000 or to imprisonment for a term not exceeding 6 months or to both.

Duties of crane operator

16. It shall be the duty of a crane operator —

- (a) before the start of every workshift, to carry out operational tests on all limiting and indicating devices under no load conditions before any lifting operation is carried out and shall enter the results of such tests in a log book or log-sheet;
- (b) to ascertain whether the ground conditions, in particular the ground surface on which a mobile crane is to be operated, are safe for travel or any lifting operation; and if he is of the opinion that it is not safe for travel or any lifting operation, he shall report this to the lifting supervisor;
- (c) to ensure that any outrigger when it is required is fully extended and secured;
- (d) not to carry out any lifting operation unless he has been briefed by the lifting supervisor on the lifting plan referred to in regulation 4;
- (e) not to hoist any object if he is unable to ascertain the weight of the load;

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- (f) not to hoist any load unless he has received a clear signal from a signalman when this is required under regulation 19;
 - (g) not to engage in any act or manoeuvre which is not in accordance with safe and sound practice;
 - (h) not to hoist any load if there is any obstruction in the path of manoeuvre and if there is any such obstruction, he shall report this immediately to the lifting supervisor;
 - (i) not to manoeuvre or hold any suspended load over any public road or public area unless that road or area has been cordoned off;
 - (j) not to operate a mobile crane or a tower crane within 3 metres of any live overhead power line;
 - (k) not to use the crane for any operation for which it is not intended, including pulling or dragging a load;
 - (l) to ensure that any stationary truck mounted or wheel mounted crane is adequately and securely blocked while it is on a slope; and
 - (m) to report any failure or malfunction of the crane to the lifting supervisor and to make an appropriate entry of the failure or malfunction in the log book or log-sheet of the crane.

PART IV

APPOINTMENT AND DUTIES OF PERSONNEL

Appointment and duties of lifting supervisor

17.—(1) It shall be the duty of the responsible person to appoint a lifting supervisor before any lifting operation involving the use of any crane is carried out in a workplace.

(2) It shall be the duty of the responsible person not to appoint any person as a lifting supervisor for any lifting operation involving the use of a crane in a workplace unless the person is one who —

- (a) has successfully completed a training course acceptable to the Commissioner to equip him to become a lifting supervisor; and
- (b) has, in the opinion of the responsible person, such relevant experience in lifting operations for a period of not less than one year before the appointment as a lifting supervisor.

(3) It shall be the duty of the lifting supervisor appointed under paragraph (1) —

- (a) to co-ordinate all lifting activities;
- (b) to supervise all lifting operation by a mobile crane or tower crane in accordance with the lifting plan referred to in regulation 4;
- (c) to ensure that only registered crane operators, appointed riggers and appointed signalmen participate in any lifting operation involving the use of a mobile crane or a tower crane;
- (d) to ensure that the ground conditions are safe for any lifting operation to be performed by any mobile crane;
- (e) to brief all crane operators, riggers and signalmen on the lifting plan referred to in regulation 4; and
- (f) if any unsatisfactory or unsafe conditions are reported to him by any crane operator or rigger, take such measures to rectify the unsatisfactory or unsafe condition or otherwise ensure that any lifting operation is carried out safely.

Appointment and duties of rigger

18.—(1) It shall be the duty of the responsible person to appoint a rigger before any lifting operation involving the use of any mobile crane or tower crane is carried out in the workplace by a crane operator.

(2) It shall be the duty of the responsible person —

- (a) not to appoint any person as a rigger in a workplace unless the person has successfully completed a training course acceptable to the Commissioner to equip him to be a rigger; and
- (b) to ensure that the rigger who is appointed under paragraph (1) is attired in such a way as would distinctively identify him as a rigger.

(3) No person shall rig up loads for any lifting operation by a mobile crane or tower crane unless he is a rigger appointed in accordance with paragraph (1).

(4) It shall be the duty of a rigger appointed under paragraph (1) to —

- (a) check the slings to be used for slinging the loads to ensure that the slings are of good construction, sound and suitable material, adequate strength and free from patent defect;

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- (b) ensure that an adequate number of legs of the sling are used and that the slinging angle is correct so as to prevent the sling from being overloaded during the hoisting;
 - (c) ascertain the weight of the load which is to be lifted and inform the crane operator of the weight of the load;
 - (d) ensure that only proper lifting gears are used in conjunction with the sling;
 - (e) ensure that the load to be lifted is secure, stable and balanced;
 - (f) ensure that any loose load (which includes any stone, brick or tile) is placed in a receptacle to prevent the load or part thereof from falling during the lifting operation;
 - (g) place adequate padding at the edges of the load which come in contact with the sling so as to prevent the sling from being damaged; and
 - (h) report any defect in the lifting gear to the lifting supervisor.

Appointment and duties of signalman

19.—(1) It shall be the duty of the responsible person to appoint a signalman before any lifting operation involving the use of any mobile crane or tower crane is carried out in a workplace by a crane operator.

(2) It shall be the duty of the responsible person —

- (a) not to appoint any person as a signalman in a workplace unless the person has successfully completed a training course acceptable to the Commissioner to equip him to be a signalman; and
- (b) to ensure that the signalman who is appointed under paragraph (1) is attired in such a way as would distinctively identify him as a signalman.

(3) No person shall give signal to the crane operator unless he is a signalman appointed in accordance with paragraph (1).

(4) It shall be the duty of the signalman appointed under paragraph (1) to —

- (a) ensure or verify with the rigger that the load is properly rigged up before he gives a clear signal to the crane operator to lift the load; and
- (b) give correct and clear signals to guide the crane operator in the manoeuvre of the load safely to its destination.

PART V

INSTALLATION, REPAIR, ALTERATION, TESTING
AND DISMANTLING OF MOBILE CRANE
OR TOWER CRANE

Only approved crane contractor to install, repair, alter or dismantle mobile crane or tower crane

20.—(1) No person shall install, repair, alter or dismantle a mobile crane or tower crane unless he is an approved crane contractor.

(2) Paragraph (1) shall not apply —

- (a) to the installation or dismantling of a fly jib; and
- (b) to the repair of any non-load bearing part of a crane, unless the repair affects the safe operation of the crane.

Application for approval to be approved crane contractor

21.—(1) A firm or company may apply to the Commissioner for approval to act as an approved crane contractor.

(2) An application under paragraph (1) shall be —

- (a) accompanied by the appropriate fee specified in the Third Schedule and such fee shall not be refundable;
- (b) in such form and manner as the Commissioner may require; and
- (c) accompanied by such particulars, information, statements and documents as the Commissioner may require.

Certificate of approval

22.—(1) On receipt of an application under regulation 21(1), the Commissioner may —

- (a) issue to the applicant a certificate of approval, subject to such conditions as the Commissioner may think fit to impose; or
- (b) refuse to approve the application.

(2) Where the Commissioner refuses to approve the applicant to act as an approved crane contractor, he shall give the applicant notice in writing of the reasons for his refusal.

(3) The Commissioner may at any time vary or revoke any of the existing conditions imposed under paragraph (1) or impose new conditions.

(4) A certificate of approval for a firm or company to act as an approved crane contractor shall, unless the approval for the firm or company to act as an approved crane contractor is earlier cancelled, be valid for a period of 2 years from the date of the approval or for such shorter period as the Commissioner may specify in the certificate of approval.

(5) A certificate of approval may, on payment of the renewal fee specified in the Third Schedule, be renewed by the Commissioner for such period as the Commissioner may determine, from the date immediately following that on which, but for its renewal, the certificate of approval would have expired.

Production of certificate of approval upon request

23.—(1) It shall be the duty of an approved crane contractor to produce his certificate of approval for inspection upon request by an inspector.

(2) Any person 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.

Suspension or cancellation of certificate

24. The Commissioner may suspend or cancel the certificate of approval issued to any approved crane contractor if the Commissioner is satisfied that the approved crane contractor —

- (a) has obtained the certificate of approval under these Regulations by means of fraud, false representation or the concealment of any material fact; or
- (b) is contravening or has contravened any condition subject to which the certificate was issued.

Notice of suspension or cancellation of certificate

25.—(1) When the Commissioner has suspended or cancelled the certificate of approval under regulation 24, the Commissioner shall

inform the approved crane contractor concerned by notice in writing of such suspension or cancellation.

(2) The suspension or cancellation shall take effect 21 days after the date of the service of the notice on the approved crane contractor or, if an appeal against the suspension or cancellation of the certificate of approval has been made to the Minister under paragraph (4), on the date the Minister dismisses the appeal.

(3) Notwithstanding that the suspension or cancellation has not taken effect, any approved crane contractor whose certificate of approval is suspended or cancelled by the Commissioner shall not, between the date of the service of the notice of suspension or cancellation and the date the suspension or cancellation takes effect (both dates inclusive), install, repair, alter or dismantle a mobile crane or tower crane.

(4) An approved crane contractor whose certificate of approval has been suspended or cancelled by the Commissioner under regulation 24 may, within 21 days of the date of the service of the notice of suspension or cancellation, appeal to the Minister whose decision shall be final.

(5) A notice of suspension or cancellation may be served on any firm or company by leaving it at, or sending it by registered post to, the last known business address.

Duties of approved crane contractor

26.—(1) Subject to paragraph (2), it shall be the duty of an approved crane contractor to —

- (a) obtain a manufacturer's manual which contains instructions on the safe procedures for the installation, repair, alteration and dismantling of the mobile crane or tower crane, before he installs, repairs, alters or dismantles any mobile crane or tower crane; and
- (b) ensure that the crane is installed, repaired, altered or dismantled in accordance with the instructions contained in such manual.

(2) Where the manual referred to in paragraph (1) is not available, it shall be the duty of the approved crane contractor to ensure that the installation, repair, alteration or dismantling of any mobile crane or tower crane is under the immediate supervision of an authorised examiner.

Duties of owner of mobile crane and tower crane

27. It shall be the duty of the owner of any mobile crane or tower crane to ensure that after every installation, repair, alteration and dismantling of a mobile crane or tower crane —

- (a) the crane is tested and certified safe by an authorised examiner for the operations for which it is intended; and
- (b) the crane is not used unless it has been tested and certified in accordance with sub-paragraph (a).

PART VI**MISCELLANEOUS****Offence**

28. Any person who contravenes regulation 4(1) or (2), 5(1), (2) (4) or (5), 14(3), 16, 17(1), (2) or (3), 18(1), (2), (3) or (4), 19(1), (2), (3) or (4), 20(1), 25(3), 26(1) or (2) or 27 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

29. The Factories (Operation of Cranes) Regulations (Cap. 104, Rg 10) are revoked.

Savings and transitional provision

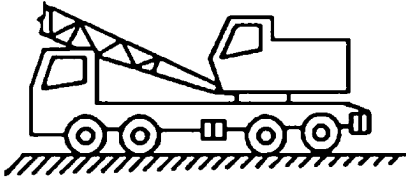
30. Every person who, immediately before 10th September 2011, is —

- (a) a crane operator registered under the repealed Factories (Operation of Cranes) Regulations (Cap. 104, Rg 10); or
- (b) an approved crane contractor approved under the repealed Factories (Operation of Cranes) Regulations,

shall be deemed to be registered or approved under regulations 7 and 22 of these Regulations respectively, and such registration or approval shall expire on the day it would have expired if these Regulations had not been enacted.

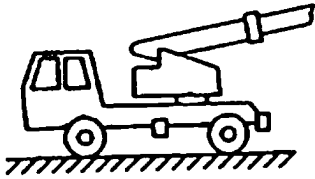
FIRST SCHEDULE
TYPES OF MOBILE CRANES

Regulation 2

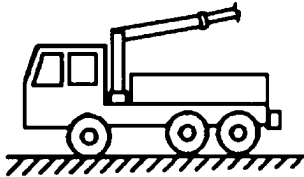


Truck mounted crane

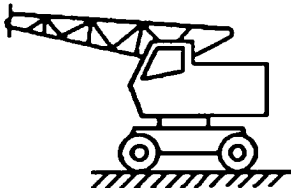
Type (a)



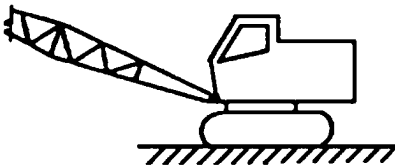
Type (b)



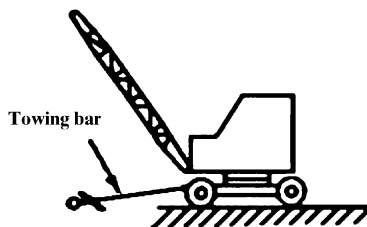
Lorry loader



Self-propelling wheel mounted crane



Self-propelling crawler track mounted crane

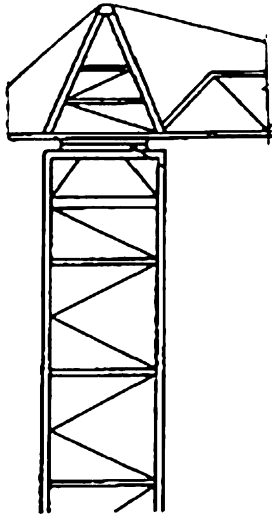


Towing bar

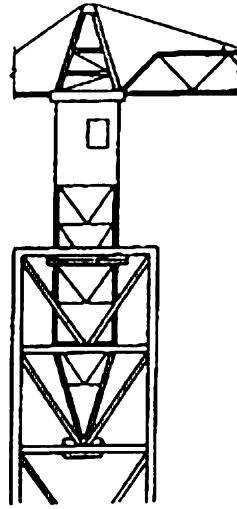
Portable crane

SECOND SCHEDULE
TYPES OF TOWER CRANES

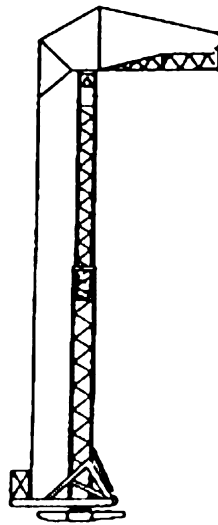
Regulation 2



(a) Mono tower



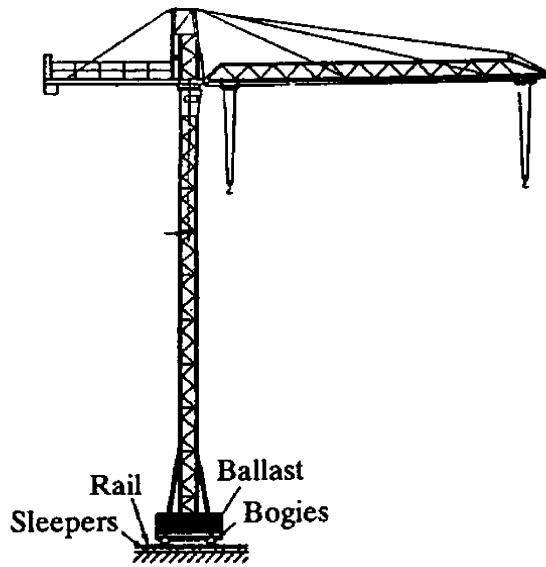
(b) Inner and outer tower



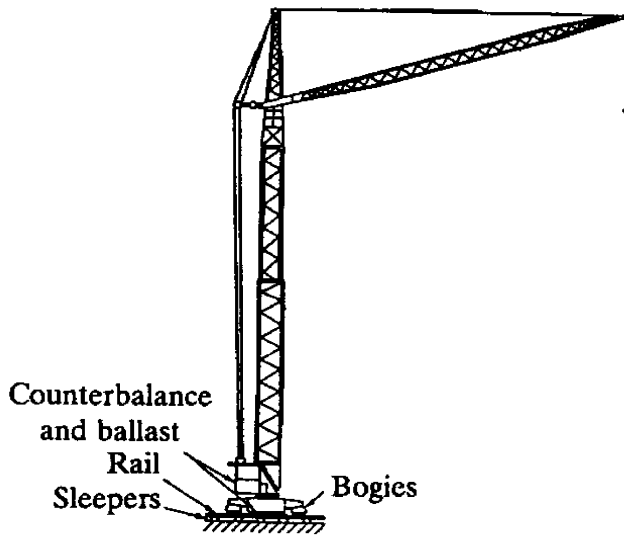
(c) Telescopic tower

SECOND SCHEDULE — *continued*

MOUNTED TOWER CRANES



(d) With saddle-jib and fixed tower



(e) With luffing jib and slewing tower

THIRD SCHEDULE

Regulations 6(2), 8(3), 11(1),
21(2) and 22(5)

FEES

<i>First column</i>	<i>Second column</i>
1. An application for registration as a crane operator	\$20
2. An application for renewal of registration as a crane operator	\$20
3. To replace a certificate of registration as a crane operator	\$10 per certificate to be replaced
4. An application for approval as a crane contractor	\$150
5. An application for renewal of approval as a crane contractor	\$150.

Made this 8th day of September 2011.

LOH KHUM YEAN
*Permanent Secretary,
Ministry of Manpower,
Singapore.*

[C010-048-00010; AG/LLRD/SL/354A/2010/6 Vol. 1]

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