

PROVISIONAL LOCAL VESSELS ADVISORY COMMITTEE

Draft Code of Practice – Designation of Competent Persons **(September 2004)**

Purpose

1. This paper aims at providing practical guidance and recommendations for interpreting and determining whether a person is competent, reliable or trained to carry out or perform the duties imposed under any particular provision of the Merchant Shipping (Local Vessels)(Works) Regulation. Ship owners, masters or coxswain in charges of works, local lighter workers, stevedoring/marine repair contractors and subcontractors, works supervisors, safety personnel, competent examiners, employers, other persons in charge of works and persons employed in ship repairs, ship breaking, cargo handling and marine construction work should read this Code of Practice.

Background

2. Presently, vessels in the waters of Hong Kong undergoing ship repairs, ship breaking, cargo handling operation and marine construction work (defined as “works” in the Ordinance) are under the control of the Shipping and Port Control Ordinance, Cap 313. However, when the Merchant Shipping (Local Vessels) Ordinance, Cap 548, comes into force, local vessels carrying out works will be governed by the Merchant Shipping (Local Vessels) Ordinance. The non-local vessels carrying out works will remain under the ambit of the Shipping and Port Control Ordinance. With regard to a Chinese coastal vessel arriving in Hong Kong, the vessel will be under ambit of the Merchant Shipping (Local Vessels) Ordinance, if the vessel obtains a permit issued by the Director of Marine.
3. This Code of Practice is applicable to both local vessels and non-local vessels carrying out works afloat, but inapplicable to a vessel which is on a slipway or in a drydock. The authority for the approval and issue of this Code is vested in the Director of Marine in pursuant to the Section 45A of the Merchant Shipping (Local Vessels) Ordinance, Cap 548 and the Section 44A of the Shipping and Port Control Ordinance, Cap 313.

4. The “Draft Code of Practice – Designation of Competency Persons” was distributed in October 2004 to the marine industry including container terminals, worker unions, trade associations, Occupational Safety and Health Council, safety personnel, etc. for consultation.

Code of Practice – Designation of Competent Persons

5. This Code recommends standards to judge the competency of competent persons mentioned in the Regulation. The Regulation stipulates competent person :
 - (a) to operate powered hatch coverings and hull doors, etc. (section 17)
 - (b) to supervise the application of heat treatment to lifting gear made of steel.(section 29)
 - (c) to inspect lifting gear and wire ropes for certificates to be obtained. (section 34, section 36 and section 39)
 - (d) to be in charge for operating lifting appliances. (section 48)
 - (e) to operate cranes or attend to falls on winch ends or winch drums. (section 53)
6. The level of competency required in each work situation is fully explained in the Code. The yardstick is laid to measure the knowledge, skill, ability, training, and experience required of a competent person. The employer also has the duty and obligation to determine and ensure the competency of competent persons employed by him, to have the ability to execute the duties of a competent person.

The Consultation Process

7. So far the feed back from the industry is positive. Comments are being collected and studied. Members are welcome to comment on the Code for its endorsement.

*Marine Industrial Safety Section, Marine Department
Hong Kong SAR Government
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Draft Code of Practice

Designation of Competent Persons

Issued under Section 45A(1) of the Merchant Shipping (Local Vessels) Ordinance, Cap 548



Marine Industrial Safety Section

Marine Department, HKSAR

Record on Updating and Amendments

This Code of Practice is issued under section 45A(1) of the Merchant Shipping (Local Vessels) Ordinance through the Gazette Notice. Subsequent updating and amendments would be notified to the industry through further notice in the Gazette from time to time. This record sheet is intended for good record keeping of this Code of Practice.

Amendment No.	Gazette No.	Gazette Date	Effect Date	Topic Areas / pages

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Foreword

The Merchant Shipping (Local Vessels)(Works) Regulation (the “Regulation”) is made under section 89 of the Merchant Shipping (Local Vessels) Ordinance, Cap 548. The administration of the regulation stipulates competent persons in the control of workplace safety in carrying out works, which by definition means (a) repairs to any local vessel; (b) the breaking up of a local vessel; (c) cargo handling on a local vessel; or (d) marine construction.

This Code of Practice (the “COP”) interprets the competence of persons required under any particular provisions of this regulation to assist the determination whether a person is competent, reliable or trained to carry out or perform the duties specified in the Regulation.

This approved COP is issued by the Director of Marine under Section 45A(1) of the Merchant Shipping (Local Vessels) Ordinance (the “Ordinance”), Cap 548. It is important to note that compliance with this COP does not of itself confer immunity from legal obligations in Hong Kong. The statutory provisions referred to or cited in the COP are those in force as at ().

Under Section 45A(4) of the Ordinance, any person who fails to observe a provision of this approved Code shall not render himself liable to any criminal proceedings, but any such failure may be relied upon by any party to the proceedings as tending to establish or to negative any liability which is in question in those proceedings.

1. Scope

- 1.1 This Code of Practice (COP) recommends standards to judge whether a person is competent, reliable or trained to carry out or perform the duties imposed under any particular provision of the Merchant Shipping (Local Vessels) (Works) Regulation (the “Regulation”).
- 1.2 The Regulation stipulates competent persons :
- (1) To operate powered operated hatch coverings and hull doors, etc. (section 17)
 - (2) To supervise the application of heat treatment to lifting gear made of steel. (section 29)
 - (3) To inspect lifting gear and wire ropes for certificates to be obtained. (section 34 , section 36 and section 39)
 - (4) To be in charge for operating lifting appliances. (section 48)
 - (5) To operate cranes or attend to falls on winch ends or winch drums. (section 53)
- 1.3 This COP also relates to statutory obligations under the Shipping and Port Control Ordinance and Shipping and Port Control (Works) Regulations.
- 1.4 The relevant statutory regulations to be complied with are indicated on the left margin of the provisions of this COP for ease of reference.

2. Interpretation

2.1 For the purpose of this COP :

“competent examiner” means –

- (a) a person who is registered under the Engineers Registration Ordinance (Cap 409) within a discipline specified in Schedule 3; or
- (b) [a body or organisation]/[any other person] approved by the Director under section 74.

“competent person” means a person who is competent to carry out the duties of a competent person under the relevant provision.

“crane” means any appliance equipped with mechanical means of hoisting and lowering a load and for transporting the load while suspended; also all chains, ropes, swivels, or other tackle (down to and including the hook), used in the operation of the appliance.

“Director” means the Director of Marine.

“hatch” means an opening in a deck of a vessel used for -

- (a) loading and unloading of the vessel;
- (b) (b) trimming; or
- (c) (c) ventilation..

“hatch covering” means steel cover(s) in one piece or sections fitted over the hatch with securing and sealing arrangements to keep the hatch watertight.

“heat treatment” means the process by which steel is subjected to one or more controlled temperature cycles for modifying its properties.

“inspector” means a person appointed under section 39 of the Ordinance.

“lifting appliance” means a crane, winch, hoist, derrick boom, sheer legs, excavator, pile driver, pile extractor, fork lift truck or other self-propelled machine, and any other description of lifting appliance, derrick and mast bands, goose-necks, eyebolts, and all other permanent attachments to a derrick, mast or deck, used on a vessel for the purposes of hoisting or lowering in connection with works.

“lifting gear” includes a chain sling, rope sling, canvas sling, net, tray, board, box, bull rope, snotter, can hook or other means of supporting cargo and attachments thereto including a ring, link, hooks plate, clamp, shackle, swivel, eyebolt, bridle, beams, spreader, rope and wire, used on a vessel in connection with works.

“register of lifting appliances and lifting gear” means a register of lifting appliances and lifting gear required to be kept under section 41 of the Regulation.

“relevant safety training course” in relation to a person who operates or is in charge of a crane, means the safety training course called “Shipboard crane operator safety course” provided by a person approved under section 73 of the Regulation.

“workplace” means any place on a local vessel in which a person employed carries out works.

“works” means (a) repairs to any local vessel; (b) the breaking up of a local vessel; (c) cargo handling on a local vessel; or (d) marine construction.

3. Competency of Competent Persons

3.1 *Definition*

3.1.1 A competent person is regarded as competent if he is qualified and well trained in his trade. He is capable of identifying predictable, existing and potential hazards in his particular areas of operation.

3.1.2 To make a person competent, he must possess adequate knowledge and practical experience, and have the ability, necessary skill and authority to eliminate those hazards identified in the workplace.

3.1.3 The competent person fully complies with the foregoing is considered reliable to carry out or perform the duties imposed under any particular provision of the Regulation.

3.2 *Designation of a Competent Person*

3.2.1 It is the duty and obligation of the employer to determine the competency of all persons employed by him, including competent persons, to have the ability to execute the duties of a competent person.

3.2.2 Possession of a valid certificate or training card alone does not qualify a worker as a competent person. He needs to comply with the full definition in paragraph 3.1 of a competent person.

3.2.3 The competent persons are responsible for creating a safe working environment. The workplace conditions may not be altered unless under the direct supervision of a competent person.

3.2.4 A competent person is not necessary a supervisor, who cannot countermand the expertise and directives of a competent person.

3.3 *The Role of a Competent Person*

3.3.1 The employer and the person in charge of works under the Regulation must select and empower suitable competent persons to execute the duties and tasks required under the Regulation, and to establish the role of competent persons in relation to all other persons employed in the workplace and support their actions.

4. Practical Guidance of Requirements of Competent Persons

section 17

4.1 Power operated hatch coverings and hull doors, etc.

4.1.1 Persons employed in works on a vessel may encounter work situations where someone has to open, close or operate hatch covering, hull door, ramp and retractable deck or similar ship's equipment operated by power (electric, hydraulic or pneumatic). The operator must be a competent person who has:

4.1.1.1 Knowledge

He is well acquainted with the safe working procedures of the power operated equipment, and follows the manufacturer's operating guidelines. He knows about the safe system of work and the location and function of safety devices, master switches, on-off switches and emergency stops.

4.1.1.2 Skill

He has the skill of using hand tools, machine tools, measuring instrument and testing devices to conduct simple functional checks of the power operating devices.

4.1.1.3 Ability

He has the ability to control machinery and is physically fit and sober when operating the power operated equipment, as not to cause unnecessary risk of accident and bodily injury. Normally, he is an adult

who has attained the age of 18 years.

4.1.1.4 Training

He has received adequate information, instruction and training provided by his employer or the person in charge of works to render him competent to use such equipment.

4.1.1.5 Experience

He has engaged in ship handling and practised seamanship for not less than one year, involving in the operation of deck machinery, such as winches and windlasses, lifting appliances and lifting gear, etc.

- 4.1.2 A competent person referred to in section 17 is usually a seaman designated by the master/coxswain of the vessel. However, if a shore mechanic is employed by a repair or engineering firm to carry out inspection, maintenance and repair work on board the vessel, he must have the authorisation from the master/coxswain or ship owner of the vessel prior to operating any power operated equipment or devices on board the vessel. His training, knowledge, skill and practical workshop experience relating to the type of equipment installed on board are counted towards the compliance requirement of a competent person stipulated in the Regulation. Likewise, a shore stevedore or person employed for cargo handling work should also obtain permission from the master/coxswain to authorise him the use of such power operated equipment. He is competent to operate cranes and other lifting appliances and should have attended the shipboard crane operator safety training course and obtained a valid certificate approved by the Director.

section 29

4.2 Restriction on using certain lifting gear requiring heat treatment

- 4.2.1 The owner of a lifting appliance or lifting gear concerned or a

person in charge of cargo handling work using the lifting appliances and lifting gear for the purposes of hoisting or lowering cargo is liable for the use of lifting gear made of steel, or having any part made of steel, having undergone improper heat treatment. In carrying repair work to the lifting gear, preheating is necessary prior to welding to reduce the cooling rate of the heat affected zone to control the brittleness of steel metal and annealing is also employed to relieve the residual stresses induced in the welding and work processes. The Regulation stipulates that heat treatment is required to be carried out under the supervision of a competent person. The competent person is usually a professional designated by his employer, ie the repair shop or engineering firm employing him, who has the necessary skills and knowledge and was trained as a competent person in this regard. The competent person supervising the application of heat treatment to any lifting gear should satisfy the following requirements:

4.2.1.1 Knowledge

He should have the knowledge of material science and metallurgy. He knows about welding processes and understands the mechanical tests and chemical analysis of steel materials.

4.2.1.2 Skill

He has the skill of using common non-destructive methods to assure the quality of work and to detect flaws and defects in the lifting gear after heat treatment.

4.2.1.3 Ability

The competent person has the ability to understand and cause to carry out written or oral information or instruction to the workers under his supervision. He is able to inspect and evaluate test results for appropriate action to be taken, and maintain records of the

inspection and tests for production to the inspector on demand.

4.2.1.4 Training

The competent person designated by his employer recognises developing hazards in the workplace and was trained to do the right job assigned by his organisation. Apart from on-the-job training and other in-house training provided by his employer, he is preferably holding academic and professional attainment in the relevant disciplines such as mechanical engineering, marine engineering, chemical engineering, material science and welding technology.

4.2.1.5 Experience

He has at least one year experience involving work requiring the heat treatment process after satisfying the training requirement of his employer.

4.2.2 The employer of the competent person must ensure that a competent person performs his designated duties. The competent person may not be on site all the time. He is responsible for creating and developing safe work procedures and a safe work environment which may not be altered except under the direct supervision of the competent person.

4.2.3 The owner of the lifting appliances and lifting gear or the person in charge of works sometimes secure the services of the competent examiners testing and certifying the lifting appliances and lifting gear. For the purposes of section 29, and by virtue of their training and practical experience, these persons are considered having satisfied the criteria of a competent person supervising any heat treatment process to lifting gear.

certificates to be obtained, etc.

4.3.1 The owner of a lifting appliance or lifting gear or the person in charge of works has to maintain a register of lifting appliances and lifting gear for production to an inspector for inspection as required under section. 41 and section 42. The lifting gear and wire ropes are subject to periodic inspections at 3 months intervals by a competent person, who has to enter, in the relevant register of lifting appliances and lifting gear a certificate of inspection in respect of the lifting gear and all the particulars required to be entered in the register with regard to the inspection. A competent person in the context of operating a local lighter refers to the derrick crane operator who is usually the head lighterman in charge of the cargo handling work. The competent person carrying out inspection has to satisfy the following requirements:

4.3.1.1 Knowledge

He is fully acquainted with the operation, safety rules, precautions, maintenance and overhaul requirements of lifting appliance and lifting gear that he has to inspect. He is conversant with the rig of the cargo gear and knows the location and function of safety devices, master switches, on-off switches and emergency stops of the winches. He knows the safe working loads of all lifting gear and wire ropes he inspects and ensures that they are duly tested and examined by a competent examiner before use or after being lengthened, altered or repaired by welding. He will not use any lifting appliance having any stress-bearing part which has been substantially altered or repaired unless it has been tested and examined by a competent examiner after the alteration and repair.

4.3.1.2 Skill

He has the skill of using hand tools for splicing wire ropes, machine tools, measuring instrument and

testing devices to conduct simple functional checks of the lifting gear and wire ropes he inspects.

4.3.1.3 Ability

A competent person is able to identify defects and take appropriate action for rectification to maintain the safe working order of the lifting gear and wire ropes according to Part 4 Lifting Appliances and Lifting Gear of the Regulation. After each inspection, he is able to enter in the relevant register of lifting appliances and lifting gear a certification of inspection and all the particulars required to be entered in it with regard to the inspection.

4.3.1.4 Training

He is trained and competent to operate a crane. In addition, he is required to hold a valid safety training certificate in respect of having attended an approved shipboard crane operator safety training course. Alternatively, he may hold such other training certificate(s) which is recognised by the Director as relevant and having the same level of instruction and safety standard.

4.3.1.5 Experience

The competent person must have at least one year working experience relating to the type of lifting appliance and lifting gear he has operated or use, and has on hand experience of lubrication and maintenance of wire ropes, lifting blocks, shackles and swivels, etc..

4.3.2 A shore mechanic may be engaged by the owner of the lifting appliance and lifting gear to carry out inspection and sign the certificate of inspection. He is considered as competent if he was

trained and designated by his employer, a repair workshop or engineering firm, and satisfies the criteria of a competent person listed in the foregoing paragraphs. Competent examiners of lifting appliances and lifting gear, by virtue of their training and practical experience, are competent to inspect and sign for the certificates.

- 4.3.3 If the person in charge is the master/coxswain of the vessel, for the purposes of these Regulations, he can designate the chief officer, a person considered as competent by virtue of his training and his supervisory position on board the vessel, to carry out inspection of the lifting gear and wire ropes and sign the certificate of inspection in the register of lifting appliances and lifting gear.

section 48

4.4 **Qualified persons to be in charge of lifting appliances**

- 4.4.1 This regulation aims at the prevention of the dangerous practice of leaving a cargo load suspended from any lifting appliance unattended. The person qualified to be in charge of the lifting appliance is normally the competent person who is competent to operate the lifting appliance as stipulated in Reg. 53 which will be further explained in paragraph 4.5 below.

The qualified person is one satisfying the following requirements:

4.4.1.1 Knowledge

He is well acquainted with the safe working procedures of the type of lifting appliance he is attending; also knows about the safe system of work and the location and function of safety devices, electrical and/or mechanical controls of the hoisting winch and emergency stops of the machinery.

4.4.1.2 Skill

He has the skill of using hand tools, machine tools,

measuring instrument and testing devices to conduct simple functional checks of the lifting appliance under his charge.

4.4.1.3 Ability

He has the ability to assess the hazards associated with the work in hand and is physically fit and sober at the time of attending to the lifting appliance under his charge, as not to cause unnecessary risk of accident and bodily injury. He must have attained the age of 18 years to be qualified in this position.

4.4.1.4 Training

He is trained and competent to operate the lifting appliance. In addition, he is required to hold a valid safety training certificate in respect of having attended an approved shipboard crane operator safety training course. Alternatively, he may hold such other training certificate(s) which is recognised by the Director as relevant and having the same level of instruction and safety standard.

4.4.1.5 Experience

The qualified person should acquire sufficient practical experience to operate a crane or the type of lifting appliance he is taking charge of. His practical training and experience associated with shipboard lifting appliance should not be less than one year.

4.4.2 A qualified person may sometimes be a crewmember of the vessel designated by the master/coxswain of the ship to take charge of the lifting appliance. He should also comply with the competency requirements listed in paragraphs 4.4.1.1 to 4.4.1.5. However, if a shore mechanic is employed by a repair or

engineering firm to carry out inspection, maintenance and load test after repair work on board the vessel, he must have the authorisation from the master or ship owner of the vessel prior to taking charge of or operating any crane or lifting appliance on board the vessel. His training by his employer, knowledge of cranes, skill and practical workshop experience relating to the type of equipment installed on board are counted towards the compliance requirement of a competent person stipulated in the Regulation. He may hold other training certificates recognised by the Director as relevant to the duties he is undertaking.

Section 53

4.5 **Operators of cranes and other lifting appliances, etc**

4.5.1 A crane or other lifting appliance for the purposes of hoisting or lowering in connection with cargo handling work must be operated by a competent person who satisfies the following requirements:

4.5.1.1 **Knowledge**

He is well acquainted with the safe working procedures of the type of crane or lifting appliance he is operating; also knows about the safe system of work and the location and function of safety devices, electrical and/or mechanical controls of the hoisting winch and emergency stops of the machinery. He knows how to check the maintenance record and test certificates of the lifting appliance and lifting gear before using for hoisting and lowering a load.

4.5.1.2 **Skill**

He has the skill of using hand tools, machine tools, measuring instrument and testing devices to conduct simple functional checks of the lifting appliance under his charge.

4.5.1.3 **Ability**

He has the ability to effectively control the machinery and is physically fit and in good health, and at the time of operating the crane or lifting appliance, not under the influence of medicine or alcohol, so as not to cause unnecessary risk of accident and bodily injury. He must have attained the age of 18 years to be considered as competent and reliable.

4.5.1.4 Training

He is trained and competent to operate a crane. In addition, he is required to hold a valid safety training certificate in respect of having attended an approved shipboard crane operator safety training course. Alternatively, he may hold such other training certificate(s) which is recognised by the Director as relevant and having the same level of instruction and safety standard.

4.5.1.5 Experience

The competent person should acquire sufficient practical experience to operate a crane or other lifting appliances he is taking charge of. His practical training and experience associated with operation of shipboard cranes and other lifting appliances should not be less than one year.

- 4.5.2 Persons operating a lifting appliance other than a crane or attending to falls on winch ends or winch drums should have also attained the age of 18 years and be competent to operate the type of lifting appliance he is required to operate and have sufficient practical experience in handling wire ropes and winch machinery. The competence develops by virtue of his training and practice in the trade which should not be less than one year. A person is considered reliable to carry out his duties of operating a lifting appliance or attending to cargo falls on winch ends or winch drum, if, apart from his competence, he is also in

good health and not under the influence of medicine or alcohol as to affect his judgement at work, and is able to identify and eliminate any immediate hazards to prevent unnecessary risk of bodily injury.

- 4.5.3 Operators of cranes and other lifting appliances on board a vessel must have the authorisation from the master/coxswain or owner of that vessel before carrying out any works.

References

Code of Safe Working Practices for Merchant Seamen, Consolidated Edition-February 2004, Maritime and Coastguard Agency (MCA), UK

Regulations (Standards – 29CFR), US Department of Labour, Occupational Safety & Health Administration

Guidance Notes on Inspection, Thorough Examination and Testing of Lifting Appliances and Lifting Gear, 2001, Labour Department, Hong Kong SAR

Structural Materials, 1990, Open University

Marine Department Contacts

1. For reporting of shipboard industrial accidents and for enquiries on occupational safety and health matters relating to shipboard industrial operations including cargo handling, ship-repairing and marine construction during office hours -

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2. For reporting of marine accidents during office hours -

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3. For enquiries on matters relating to dangerous goods carried by vessels during office hours

Dangerous Goods and Project Section
Room 307, Harbour Building,
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4. For reporting of marine and shipboard industrial accidents during and outside office hours -

Vessel Traffic Centre
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