

# Marine Notice No. 37 of 2009

<u>Notice to all:</u> Shipping companies, ship owners, ship operators, shipmasters, shore based maintenance providers, equipment manufacturers, recognised organisations and all parties concerned.

# This Marine Notice Supersedes Marine Notice No. 5 of 2007

# **Amendments to Chapter III of SOLAS 1974**

Concerning Regulation 19 - Emergency Training and Drills Regulation 20 - Operational readiness, maintenance and inspections Regulation 32 - Personal life-saving appliances

# **INTRODUCTION**

Marine Notice 5 of 2007 was issued in response to The Maritime Safety Committee of the IMO amendments to Chapter III of the International Convention for the Safety of Life at Sea (SOLAS), 1974, which entered into force on 1 July 2006.

Further amendments to SOLAS Chapter III entered into force on 1<sup>st</sup> January 2009 and Marine Notice 5 of 2007 is hereby withdrawn and replaced by this update.

In addition, the Maritime Safety Committee approved Measures to Prevent Accidents with Lifeboats (MSC.1/Circ1206/Rev.1). The purpose of these guidelines is to establish a uniform, safe and documented performance of periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear. Further information and recommendations on service providers for lifeboats, launching appliances and on-load release gear was approved by the Maritime Safety Committee in May of 2008 (MSC.1/Circ.1277)

The purpose of this notice is to notify the industry of these amendments and to further clarify the maintenance and inspection requirements for launching appliances and on-load release gear which is contained in the MSC guidelines.

Copies of the <u>consolidated</u> amendments and the parts of the guidelines relevant to this Marine Notice are attached at Annex 1 (SOLAS), Annex 2 (MSC.1/Circ.1206/Rev.1) and Annex 3 (MSC.1/Circ.1277) respectively. Full copies of the IMO circulars are available at <u>www.imo.org</u>

In accordance with the MSC Guidelines the Marine Survey Office requires that the thorough examination, operational testing, repair, and overhaul of lifeboats, launching appliances and on-load release gear is carried out in accordance with SOLAS regulation III/20 by service providers authorized by them that are qualified in these operations for each make and type of equipment for which they provide the service.

Service agents in Ireland are invited to apply to the Marine Survey Office for authorisation to carry out this work. Where examination and testing is carried out on Irish flag vessels by service providers situated in other countries, the Marine Survey Office may accept or recognize service providers authorized, checked or inspected by surveyors nominated for the purpose by recognised organizations or by other SOLAS Contracting Governments.

The amendments mean that in addition to any onboard maintenance and checks the following is required:

A thorough examination of lifeboats, launching appliances and on-load release gears every year carried out by or in the presence of an authorised person.

**Every five years** in addition to the yearly requirement - a dynamic brake test of the winch and an overhaul of on-load release gears and liferaft automatic release hooks carried out by authorised personnel. On load release gear for lifeboats includes those fitted to free fall lifeboats.

# **Regulation 19 - Emergency training and drills**

This amendment is self-explanatory and needs no further clarification.

#### **Regulation 20 - Operational readiness, maintenance and inspections**

The majority of this amendment is self-explanatory.

The amended paragraph 11 of SOLAS regulation III/20 applies to launching appliances as defined in Regulation 3. A *Launching appliance* or *arrangement* is a means of transferring a survival craft or rescue boat from its stowed position safely to the water. A *survival craft* is a craft capable of sustaining the lives of persons in distress from the time of abandoning ship.

Therefore, when carrying out the 'thorough examination' required by paragraph 11.1.2, on lifeboats, the guidelines of MSC/Circ.1206/Rev.1 are to be used. These supersede MSC/Circ.1093

Bearing in mind the requirement of paragraph 3.1 of this regulation, it is strongly recommended that MSC/Circ.1206/Rev.1 also be used when developing ISM procedures for the periodic servicing and maintenance of lifesaving appliances

#### **Regulation 32 - Personal life-saving appliances**

This amendment is self-explanatory and needs no further clarification.

Director General Maritime Safety Directorate Department of Transport Leeson Lane Dublin 2 26/08/2009

> For any technical assistance in relation to this Marine Notice please contact The Marine Survey Office, Leeson Lane, Dublin 2., tel: +353 1 678 3400
> For information in relation to technical specification/type approval of radio equipment contact the Radio Surveyors, tel: +353 1 678 2363/2364/2365/2367.
> For general enquiries please contact the Maritime Safety Division tel: +353-1-678 3418 Any enquiries concerning Marine Notices should be addressed to: Maritime Safety Directorate, Department of Transport, Leeson Lane, Dublin 2 email: <u>marinenotices@transport.ie</u> or visit us at: <u>www.transport.ie</u>

# Annex 1

# Amendments to SOLAS Chapter III

# **Regulation 19 - Emergency training and drills**

The existing text of paragraph 3.3.3 and 3.3.4 are replaced by the following:

- 3.3.3 Except as provided in paragraphs 3.3.4 and 3.3.5, each lifeboat shall be launched, and manoeuvred in the water by its assigned operating crew, at least once every three months during an abandon ship drill.
- 3.3.4 In the case of a lifeboat arranged for free-fall launching, at least once every three months during an abandon ship drill the crew shall board the lifeboat, properly secure themselves in their seats and commence launch procedures up to but not including the actual release of the lifeboat (i.e., the release hook shall not be released). The lifeboat shall then either be free-fall launched with only the required operating crew on board, or lowered into the water by means of the secondary means of launching with or without the operating crew on board. In both cases the lifeboat shall thereafter be manoeuvred in the water by the operating crew. At intervals of not more than six months, the lifeboat shall either be launched by free-fall with only the operating crew on board, or simulated launching shall be carried out in accordance with the guidelines developed by the Organization.

# **Regulation 20 - Operational readiness, maintenance and inspections**

The existing text of paragraph 1 is replaced by the following:

1 This regulation applies to all ships. The requirements of paragraphs 3.2, 3.3, and 6.2 shall be complied with, as far as practicable, on ships constructed before 1 July 1986.

The existing text of paragraph 3 is replaced by the following:

# 3 Maintenance

- 3.1 Maintenance, testing and inspections of life-saving appliances shall be carried out based on the guidelines developed by the Organization<sup>\*</sup> and in a manner having due regard to ensuring reliability of such appliances.
- 3.2 Instructions for on-board maintenance of life-saving appliances complying with regulation 36 shall be provided and maintenance shall be carried out accordingly.
- 3.3 The Administration may accept, in compliance with the requirements of paragraph 3.2, a shipboard planned maintenance programme, which includes the requirements of regulation 36.

<sup>\*</sup> Refer to the Guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear (MSC/Circ.1093). *It should be noted that this SOLAS reference has been superseded by MSC/Circ.1206/Rev.1* 

The existing text of paragraph 4 is replaced by the following:

# 4. Maintenance of falls

Falls used in launching appliances shall be inspected periodically<sup>\*</sup> with special regard for areas passing through sheaves, and renewed when necessary due to deterioration of the falls or at intervals of not more than 5 years, whichever is the earlier.

The existing text of paragraph 6 is replaced by the following:

# 6 Weekly inspection

The following tests and inspections shall be carried out weekly and a report of the inspection shall be entered in the log-book:

- 1. all survival craft, rescue boats and launching appliances shall be visually inspected to ensure that they are ready for use. The inspection shall include, but is not limited to, the condition of hooks, their attachment to the lifeboat and the on-load release gear being properly and completely reset;
- 2. all engines in lifeboats and rescue boats shall be run for a total period of not less than 3 min, provided the ambient temperature is above the minimum temperature required for starting and running the engine. During this period of time, it should be demonstrated that the gear box and gear box train are engaging satisfactorily. If the special characteristics of an outboard motor fitted to a rescue boat would not allow it to be run other than with its propeller submerged for a period of 3 min, a suitable water supply may be provided. In special cases, the Administration may waive this requirement for ships constructed before 1 July 1986;
- 3. lifeboats, except free-fall lifeboats, on cargo ships shall be moved from their stowed position, without any persons on board, to the extent necessary to demonstrate satisfactory operation of launching appliances, if weather and sea conditions so allow; and
- 4. the general emergency alarm shall be tested.

In paragraph 7, the existing text is numbered as paragraph 7.2 and the following new paragraph 7.1 is added:

7.1 All lifeboats, except free-fall lifeboats, shall be turned out from their stowed position, without any persons on board if weather and sea conditions so allow.

<sup>\*</sup> Refer to the Measures to prevent accidents with lifeboats (MSC.1/Circ.1206/Rev.1)

The heading of paragraph 8 is replaced by the following:

# 8 Servicing of inflatable liferafts, inflatable lifejackets, marine evacuation systems and maintenance and repair of inflated rescue boats.

The existing text of paragraph 11 is replaced by the following:

# 11 Periodic servicing of launching appliances and on-load release gear

- 11.1 Launching appliances shall be:
- 1. maintained in accordance with instructions for on-board maintenance as required by regulation 36;
- 2. subject to a thorough examination at the annual surveys required by regulations I/7 or I/8, as applicable; and
- 3. upon completion of the examination referred to in .2 subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be the mass of the survival craft or rescue boat without persons on board, except that, at intervals not exceeding five years, the test shall be carried out with a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment.
- 11.2 Lifeboat or rescue boat on-load release gear, including free-fall lifeboat release systems, shall be:
  - 1. Maintained in accordance with instructions for on-board maintenance as required by regulation 36;
  - 2. Subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8 by properly trained personnel familiar with the system; and
  - 3. Operationally tested under a load of 1.1 times the total mass of the lifeboat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such over-hauling and test shall be carried out at least once every five years.<sup>\*</sup>

Refer to the Recommendation on testing of life-saving appliances, adopted by the Organization by resolution A.689(17). For life-saving appliances installed on board on or after 1 July 1999, refer to the Revised Recommendations on testing of life-saving appliances, adopted by the Organization by resolution MSC.81(70).

- 11.3 Davit-launched liferaft automatic release hooks shall be:
  - 1. Maintained in accordance with instructions for on-board maintenance as required by regulation 36;
  - 2. Subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8 by properly trained personnel familiar with the system; and
  - 3. Operationally tested under a load of 1.1 times the total mass of the liferaft when loaded with its full complement of persons and equipment whenever the automatic release hook is overhauled. Such over-hauling and test shall be carried out at least once every five years.<sup>\*</sup>

# **Regulation 32 - Personal life-saving appliances**

The existing text of paragraph 3 is replaced by the following:

# 3 Immersion suits

- 3.1 This paragraph applies to all cargo ships. However, with respect to cargo ships constructed before 1 July 2006, paragraphs 3.2 to 3.5 shall be complied with not later than the first safety equipment survey on or after 1 July 2006.
- 3.2 An immersion suit of an appropriate size, complying with the requirements of section 2.3 of the Code shall be provided for every person on board the ship. However, for ships other than bulk carriers, as defined in regulation IX/1, these immersion suits need not be required if the ship is constantly engaged on voyages in warm climates<sup>\*\*</sup> where, in the opinion of the Administration, immersion suits are unnecessary.
- 3.3 If a ship has any watch or work stations which are located remotely from the place or places where immersion suits are normally stowed, including remotely located survival craft carried in accordance with regulation 31.1.4, additional immersion suits shall be provided at these locations for the number of persons normally on watch or working at those locations at any time.
- 3.4 Immersion suits shall be so placed as to be readily accessible and their position shall be plainly indicated.
- 3.5 The immersion suits required by this regulation may be used to comply with the requirements of regulation 7.3.

<sup>\*</sup> Refer to the Recommendation on testing of life-saving appliances, adopted by the Organization by resolution A.689(17). For life-saving appliances installed on board on or after 1 July 1999, refer to the Revised Recommendations on testing of life-saving appliances, adopted by the Organization by resolution MSC.81(70).

<sup>\*\*</sup> Refer to the Guidelines for assessment of thermal protection (MSC/Circ.1046).

# Annex 2

# **GUIDELINES FOR PERIODIC SERVICING AND MAINTENANCE OF LIFEBOATS, LAUNCHING APPLIANCES AND ON-LOAD RELEASE GEAR**

# General

- 1 The objective of these Guidelines is to establish a uniform, safe and documented performance of periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear.
- 2 These Guidelines relate to the application of the ISM Code to periodic servicing and maintenance of lifeboat arrangements and should therefore be reflected in procedures developed for a ship under that Code.
- 3 The general principle in these Guidelines may also be used for the periodic servicing and maintenance of liferafts, rescue boats and fast rescue boats and their launching appliances and release gear.
- 4 Detailed guidance regarding some procedures covered by these Guidelines is provided in Appendix A.

#### **SOLAS regulations**

- 5 The Guidelines relate to the requirements contained in:
  - 1. SOLAS regulation III/20 Operational readiness, maintenance and inspections; and
  - 2. SOLAS regulation III/36 Instructions for on-board maintenance.

# Responsibility

- 6 The company<sup>\*</sup> is responsible for servicing and maintenance onboard its ships in accordance with SOLAS regulation III/20 and for the establishment and implementation of health, safety and environment (HSE) procedures covering all activities during servicing and maintenance.
- 7 The personnel carrying out servicing and maintenance are responsible for the performance of the work as authorized in accordance with the system specified in paragraph 10.
- 8 The above personnel are also responsible for complying with HSE instructions and procedures.

<sup>\*</sup> For the purpose of these Guidelines, "company" is as defined in SOLAS regulation IX/1.2.

9 Service providers carrying out the thorough examination, operational testing, repair and overhaul of lifeboats, launching appliances and on-load release gear should be authorised in accordance with MSC.1/Circ.1277.

## Authorization

10 Where these Guidelines require certification of servicing personnel, such certification should be issued in accordance with an established system for training and authorization in accordance with MSC.1/Circ.1277.

# Qualification levels

- 11 Weekly and monthly inspections, and routine maintenance as specified in the equipment maintenance manual(s) should be conducted under the direct supervision of a senior ship's officer in accordance with the maintenance manual(s).
- 12 All other inspections, servicing and repair should be conducted by the manufacturer's representative or a person appropriately trained and certified for the work to be done in accordance with MSC.1/Circ.1277.

#### **Reports and records**

- 13 All reports and checklists should be correctly filled out and signed by the person who carries out the inspection and maintenance work and should also be signed by the company's representative or ship's master.
- 14 Records of inspections, servicing, repairs and maintenance should be updated and filed onboard the ship.
- 15 When repairs, thorough servicing and annual servicing are completed, a statement confirming that the lifeboat arrangements remain fit for purpose should be issued by the service provider who performed the work.

# Appendix A

# SPECIFIC PROCEDURES FOR MAINTENANCE AND SERVICING

# 1 GENERAL

- 1.1 Any inspection, servicing and repair should be carried out according to the maintenance manuals and associated technical documentation developed by the manufacturer or an alternative body authorised in accordance with MSC.1/Circ.1277.
- 1.2 A full set of maintenance manuals and associated technical documentation as specified in 1.1 should be available on board for use in all operations involved in the inspection, maintenance, adjustment and re-setting of the lifeboat and associated equipment, such as davits and release gear.
- 1.3 The maintenance manuals and associated technical documentation as specified in 1.1 should include the following items as a minimum and should be periodically reviewed and updated as necessary.

# 2 THOROUGH EXAMINATION

- 2.1 As items listed in checklists for the weekly/monthly inspections also form the first part of the annual thorough examination, when carrying out this examination the inspection of these items should be performed by the ship's crew in the presence of the manufacturer's representative or other person appropriately trained and certified by the manufacturer for the work to be done in accordance with MSC.1/Circ.1277.
- 2.2 Inspection and maintenance records of inspections and routine maintenance carried out by the ship's crew and the applicable certificates for the launching appliances and equipment should be available.

# Lifeboat

- 2.3 The following items should be examined and checked for satisfactory condition and operation:
  - 1. Condition of lifeboat structure including fixed and loose equipment;
  - 2. Engine and propulsion system;
  - 3. Sprinkler system, where fitted;
  - 4. Air supply system, where fitted;
  - 5. Manoeuvring system;
  - 6. Power supply system; and
  - 7. Bailing system.

# **Release gear**

- 2.5 The following should be examined for satisfactory condition and operation after the annual winch brake test with the empty boat , as required by 3.1:
  - 1. Operation of devices for activation of release gear;
  - 2. Excessive free play (tolerances);
  - 3. Hydrostatic interlock system, where fitted;
  - 4. Cables for control and release; and
  - 5. Hook fastening.

#### Notes:

- 1 The setting and maintenance of release gear are critical operations with regard to maintaining the safe operation of the lifeboat and the safety of personnel in the lifeboat. All inspection and maintenance operations on this equipment should therefore be carried out with the utmost care.
- 2 No maintenance or adjustment of the release gear should be undertaken while the hooks are under load.
- 3 Hanging-off pennants may be used for this purpose but should not remain connected at other times, such as when the lifeboat is normally stowed and during training exercises.
- 4 The release gear is to be examined prior to its operational test. The release gear is to be re-examined after its operational test and the dynamic winch brake test. Special consideration should be given to ensure that no damage has occurred during the winch brake test, especially the hook fastening.
- 2.6 Operational test of on-load release function:
  - 1. Position the lifeboat partially into the water such that the mass of the boat is substantially supported by the falls and the hydrostatic interlock system, where fitted, is not triggered;
  - 2. operate the on-load release mechanism; and
  - 3. reset the on-load release mechanism; and
  - 4 examine the release gear and hook fastening to ensure that the hook is completely reset and no damage has occurred.
- 2.7 Operational test of off-load release function:
  - 1. position the lifeboat fully waterborne;
  - 2. operate the off-load release gear;
  - 3. reset the on-load release gear; and

4. recover the lifeboat to the stowed position and prepare for operational readiness.

# Note:

Prior to hoisting, check that the release gear is completely and properly reset. The final turning-in of the lifeboat should be done without any persons on board.

# Davit

- 2.8 The following items should be examined for satisfactory condition and operation:
  - 1. davit structure, in particular with regard to corrosion, misalignments, deformations and excessive free play;
  - 2. wires and sheaves, possible damages such as kinks and corrosion;
  - 3. lubrication of wires, sheaves and moving parts;
  - 4. functioning of limit switches;
  - 5. stored power systems; and
  - 6. hydraulic systems.

# Winch

- 2.9 The following items should be examined for satisfactory condition and operation:
  - 1. open and inspect brake mechanism;
  - 2. replace brake pads, if necessary;
  - 3. remote control system;
  - 4. power supply system and;
  - 5. winch foundation.

#### **3 DYNAMIC WINCH BRAKE TEST**

- 3.1 Annual operational testing should preferably be done by lowering the empty boat. When the boat has reached its maximum lowering speed and before the boat enters the water, the brake should be abruptly applied.
- 3.2 The five year operational test should be done by lowering the boat loaded to a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment, or equivalent load. When the boat has reached its maximum lowering speed and before the boat enters the water, the brake should be abruptly applied.
- 3.3 Following these tests, the brake pads and stressed structural parts should be re-inspected.

# Note:

In loading the boat for this test, precautions should be taken to ensure that the stability of the boat is not adversely affected by free surface effects or the raising of the centre of gravity.

# 4 **OVERHAUL OF ON-LOAD RELEASE GEAR**

Overhaul of on-load release gear includes:

- 1. dismantling of hook release units;
- 2. examination with regard to tolerances and design requirements;
- 3. adjustment of release gear system after assembly;
- 4. operational test as per above and with a load according to SOLAS regulation III/20.11.2.3; and
- 5. examination of vital parts with regard to defects and cracks.

# Note:

Non-destructive examination (NDE) techniques, such as dye penetrants (DPE), may be suitable.

# Annex 3

#### INTERIM RECOMMENDATION ON CONDITIONS FOR AUTHORIZATION OF SERVICE PROVIDERS FOR LIFEBOATS, LAUNCHING APPLIANCES AND ON-LOAD RELEASE GEAR

- 1 Administrations should ensure that the thorough examination, operational testing, repair, and overhaul of lifeboats, launching appliances and on-load release gear are carried out in accordance with SOLAS regulation III/20 by service providers authorized by them that are qualified in these operations for each make and type of equipment for which they provide the service. Such qualification should include, as a minimum:
  - 1. employment and documentation of personnel certified in accordance with a recognised national, international or industry standard as applicable, or an equipment manufacturer's established certification program. In either case, the certification program should be based on the guidelines in Appendix B for each make and type of equipment for which service is to be provided;
  - 2. availability of sufficient tools, and in particular any specialized tools specified in the equipment manufacturer's instructions, including portable tools as needed for work to be carried out on board ship;
  - 3. access to sufficient materials, spare parts and accessories as specified by the equipment manufacturer for repairing lifeboats, launching appliances and on-load release gear, as applicable;
  - 4. for servicing and repair work involving disassembly or adjustment of on-load release mechanisms, availability of the equipment manufacturer's specifications, and genuine replacement parts as specified or supplied by the equipment manufacturer; and
  - 5. a documented quality system, to include at least the following:
    - 1. code of conduct for the relevant activity;
    - 2. maintenance and calibration of equipment;
    - 3. training programmes for personnel;
    - 4. supervision and verification to ensure compliance with operational procedures;
    - 5. recording and reporting of information;
    - 6. quality management of subsidiaries and agents;
    - 7. job preparation; and

8. periodic review of work process procedures, complaints, corrective actions and issuance, maintenance and control of documents.

A documented quality system complying with the most current version of the ISO 9000 series and including the above items, would be considered acceptable.

- 2 Administrations should arrange for regular inspections of service providers to ensure that work continues to be carried out based on this interim recommendation, and should withdraw the authorization of service providers who are not in compliance. For service providers situated in other countries, the Administration may accept or recognize service providers authorized, checked or inspected by surveyors nominated for the purpose or by recognised organizations or by other SOLAS Contracting Governments.
- 3 Administrations should ensure that information regarding authorized service providers for lifeboats, launching appliances and on-load release gear is made available to mariners.
- 4 Administrations should take measures they consider appropriate to ensure that national manufacturers of equipment certified under SOLAS chapter III for installation and use onboard ships undertake to ensure that equipment, instructions, specialised tools, spare parts, training and accessories, as required, are available to independent service providers in a timely and cost effective manner.
- 5 In cases where an equipment manufacturer is no longer in business or no longer provides technical support, Administrations may authorize service providers for the equipment on the basis of prior authorization for the equipment and/or long term experience and demonstrated expertise as an authorized service provider.
- 6 The contents of this interim recommendation apply equally to manufacturers when they are acting as service providers.

# Appendix **B**

# GUIDELINES FOR CERTIFICATION OF PERSONNEL FOR SERVICING AND MAINTENANCE OF LIFEBOATS, LAUNCHING APPLIANCES AND ON-LOAD RELEASE GEAR

# General

- 1 The objective of these Guidelines is to establish standards for certification of personnel for servicing and maintenance of lifeboats, launching appliances and on-load release gear, based on annex 1 to MSC.1/Circ.1206.
- 2 Personnel for the work specified in paragraph 12 of annex 1 to MSC.1/Circ.1206 should be certified in accordance with a certification programme based on these Guidelines.

# **Education and training**

- 3 Education and training for initial certification of personnel should address, as a minimum:
  - 1. causes of lifeboat accidents;
  - 2. relevant rules and regulations, including international conventions;
  - 3. design and construction of lifeboats, including on-load release gear and launching appliances;
  - 4. education and practical training in the procedures specified in annex 1 of MSC.1/Circ.1206 for which certification is sought;
  - 5. detailed procedures for thorough examination, operational testing, repair and overhaul of lifeboat, launching appliances and on-load release gear, as applicable; and
  - 6. procedures for issuing a report of service and statement of fitness for purpose based on MSC.1/Circ.1206 (annex 1, paragraph 15).
- 4 The education and training for the personnel should include practical technical training on actual inspection and maintenance using the equipment (lifeboats, launching appliances and/or on-load release gear) for which the personnel are to be certified. The technical training should include disassembly, reassembly, correct operation and adjustment of the equipment. Classroom training should be supplemented by field experience in the operations for which certification is sought, under the supervision of an experienced senior certified person.
- 5 Prior to issuance of certification, a competency assessment should be satisfactorily completed, using the equipment for which the personnel are to be certified.

# Terms of validity of certificates and update training

- 6 Upon completion of training and competency assessment, a certificate should be issued defining the level of qualification and the scope of the certification (e.g., makes and types of equipment). The expiry date should clearly be written on the certificate. The expiry date should be within three years from the date of issuance of the certificate.
- 7 A competency assessment, and refresher training as appropriate, on the basis of that assessment, should be conducted to renew the certification.