

Subject

Air pressure test of immersion suit on board Cyprus and Sri Lanka Flagged Vessels

ClassNK

Technical Information

No. TEC-0826

Date 25 August 2010

To whom it may concern

Instructions from the several flag states regarding air pressure test of immersion suit and anti-exposure suit seams and closures were informed by ClassNK Technical Information No.TEC-0756 dated 9 December 2008.

The Cyprus Government and the Sri Lanka Government have notified ClassNK of the additional information concerning air pressure test of immersion suit on board Cyprus and Sri Lanka Flagged Vessels as per attached.

According to the informations, the air pressure test may be carried out by trained ship's crews on board the ship subject to the several conditions required by the Cyprus or the Sri Lanka Government.

For any questions about the above, please contact:

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Attachment:

1. Instructions from the Republic of Cyprus (Ref No.Circular 5/2010 of 29 January 2010)
2. Instructions from the Republic of Sri Lanka (Ref No.MSN 10/2010 of 6 July 2010)

NOTES:

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REPUBLIC OF CYPRUS
**MINISTRY OF
COMMUNICATIONS AND WORKS**



**DEPARTMENT
OF MERCHANT SHIPPING
LEMESOS**

29 January 2010

Circular No. 05 / 2010

TEN 5.13.09
TEN 4.28.03.5
TEN 16.17.18

To all Owners, Managers
and Representatives
of ships under the Cyprus Flag.

To all Recognised Organisations
and Inspectors of Cyprus Ships

Subject: Inspection and Testing of Immersion Suits

Further to my Circular No. 12/2006 issued on 01 July 2006, related to the above subject, please note the following:

1. The monthly inspection of immersion suits required by Regulation 20.7 and 36.1 / Chapter III of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, must be carried out in accordance with the Guidelines for the Monthly Shipboard Inspection of Immersion Suits and Anti-Exposure Suits by Ships' Crews (attachment No.1) approved by MSC on 28 May 2002 (MSC/Circ.1047).
2. Moreover, the periodic testing (air pressure test) of the immersion suits, must be carried out in accordance with the Guidelines for Periodic Testing of Immersion Suit and Anti-Exposure Suit Seams and Closures (attachment No.2) approved by MSC on 25 May 2004 (MSC/Circ.1114), at intervals not exceeding:
 - i. three years for immersion suits which are less than twelve years of age,
 - ii. two years for immersion suits which are over twelve years of age.

The intervals are counted from the suit's date of manufacture, up to three years for the first periodic testing. Subsequent periodic testing is counted from the date of the last periodic testing.

It is recommended that the periodic testing is performed at suitable shore based facilities equipped to make any necessary repairs in accordance with the manufacturers' recommendations.

The shore based stations which have been accepted to provide services to Cyprus ships in respect of immersion suits must fulfil the criteria of my Circular No. 12/2001

dated 15 June 2001 on "IMO Resolution A. 761 (18) as amended. Liferaft servicing stations approved and certified by SOLAS Contracting Governments or Recognized Organizations (ROs)".

3. Furthermore, it is acceptable also for the periodic testing (air pressure test) to be carried out onboard Cyprus Flag ships by the ships' crews (as per MSC/Circ.1114), if suitable equipment and trained personnel is available, as follows:
 - i. The periodic testing of the immersion suits in this case must be carried out, as follows:
 - a) every 30 months (2½ years) onboard by the ship's crew, for immersion suits which are less than ten years of age,
 - b) every year onboard by the ship's crew, for immersion suits which are over ten years of age, and
 - c) every fifth year at a suitable shore based facility, irrespective of immersion suit's age.
 - ii. The ship must be in possession of the immersion suit Manufacturer's Service Manual and an appropriate Test Kit accepted / recommended (written acceptance / recommendation should be available onboard) by the immersion suits manufacturer.
 - iii. The ship's crewmembers designated to perform the testing shall be trained in the use of the test equipment and the procedures / instructions contained in the manufacturer's Service Manual regarding the periodic testing and the related inspections of the immersion suits. All designated crewmembers shall hold a valid training certificate issued by the test equipment manufacturer.
 - iv. Procedures for the periodic testing and inspection of the immersion suits must be incorporated into the instructions manual for onboard maintenance in accordance with the guidelines contained in Regulation 36 / Chapter III of SOLAS.
 - v. The results of the inspection and testing of the immersion suits must be recorded in the log required by Regulation 36.7 / Chapter III of SOLAS. The date of the testing and inspection and the person(s) conducting the testing must be recorded in the ship's official logbook and in the log required by Regulation 36.7 / Chapter III of SOLAS.
 - vi. If, as a result of the onboard periodic testing / inspection, an immersion suit is found to need repair, such repairs must be made at a suitable shore based facility.
 - vii. The periodic testing may be conducted without a RO surveyor being present.
4. Vacuum Packed Immersion Suits (exchange concept) are also accepted onboard Cyprus Flagged Ships provided:
 - i. Instructions for the monthly inspection of the vacuum pack are provided onboard by the immersion suits manufacturer. It is hereby accepted that these instructions substitute the monthly inspection procedure required by the MSC/Circ.1047.

- ii. If the inspection indicates that the vacuum pack is damaged, the immersion suit must be immediately either inspected as per the MSC/Circ.1047 or sent for inspection and re-packing to an approved service station.
 - iii. There is a sufficient number of immersion suits onboard which the crew can open and use for drills.
5. This Circular clarifies further paragraph 7 of my Circular No. 12/2006 issued on 01 July 2006.

6. This Circular must be placed on board ships flying the Cyprus Flag.

S. S. Serghiou
Director
Department of Merchant Shipping

cc: Permanent Secretary, Ministry of Communications and Works
Permanent Secretary, Ministry of Foreign Affairs
Maritime Offices of the Department of Merchant Shipping abroad
Diplomatic Missions and Honorary Consular Officers of the Republic
Cyprus Shipping Chamber
Cyprus Union of Shipowners
PEO Trade Union
SEK Trade Union
Cyprus Bar Association



Ref. T3/1.02

MSC/Circ.1047
28 May 2002

**GUIDELINES FOR MONTHLY SHIPBOARD INSPECTION OF IMMERSION SUITS
AND ANTI-EXPOSURE SUITS BY SHIPS' CREWS**

1 The Maritime Safety Committee, at its seventy-fifth session (15 to 24 May 2002), recognizing that SOLAS regulation III/20.7 requires monthly inspection of life-saving appliances to be carried out by using the checklist required by SOLAS regulation III/36.1 to ensure that their operational readiness is maintained in service, approved Guidelines for monthly shipboard inspection of immersion suits and anti-exposure suits by ships' crews, as set out in the annex.

2 Member Governments are invited to bring the annexed Guidelines to the attention of all parties concerned, in conjunction with the relevant requirements of SOLAS regulations III/20.7 and 36.1.

ANNEX**GUIDELINES FOR MONTHLY SHIPBOARD INSPECTION OF IMMERSION SUITS
AND ANTI-EXPOSURE SUITS BY SHIPS' CREWS**

When carrying out the inspection of immersion suits and anti-exposure suits required by SOLAS regulation III/20.7, the following procedure is recommended.

- 1 Check closures on storage bag as well as general condition of bag for ease of removal of suit. Ensure donning instructions are legible. Confirm that suit is the type and size identified on the bag.
- 2 Lay the suit on a clean, flat surface. Make sure the suit is dry inside and out. Visually check for damage. Rips, tears or punctures should be repaired in accordance with manufacturer's instructions by a suitable repair station*.
- 3 Check the zipper by sliding it up and down to check for ease of operation. Using lubricant recommended by the manufacturer, lubricate the front and back of the zipper and the slide fastener. If the zipper is not functional, the suit should be removed from service and discarded or returned to the manufacturer or a suitable repair station.
- 4 If fitted, check inflatable head support and/or buoyancy ring for damage and ensure that it is properly attached. Check inflation hose(s) for deterioration. At least quarterly, the head support/buoyancy ring should be inflated and tested for leaks (this test does not apply to integral inflatable lifejackets). Leaks should be repaired in accordance with manufacturers' instructions by a suitable repair station.
- 5 Check retro reflective tape for condition and adhesion. Replace if necessary.
- 6 If fitted, check whistle and expiration date of light and battery.
- 7 Replace suits in the bag with zippers fully opened.
- 8 The opportunity should be taken at such monthly inspections for the crew to practise donning the immersion suits or anti-exposure suits.

* A "suitable repair station" is one authorized by the suit manufacturer and/or acceptable to the Administration.



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Ref. T4/3.01

MSC/Circ.1114
25 May 2004

GUIDELINES FOR PERIODIC TESTING OF IMMERSION SUIT AND ANTI-EXPOSURE SUIT SEAMS AND CLOSURES

1 The Maritime Safety Committee, at its seventy-eighth session (12 to 21 May 2004), recognizing that shipboard inspections of immersion suits and anti-exposure suits carried out in accordance with SOLAS regulation III/20.7 and MSC/Circ.1047 may not be adequate to detect deterioration of seams and closures of the suits due to adhesive ageing, and having considered the recommendation made by the Sub-Committee on Ship Design and Equipment at its forty-sixth session, approved the Guidelines for periodic testing of immersion suit and anti-exposure suit seams and closures, as set out in the annex.

2 Member Governments are invited to bring the annexed Guidelines to the attention of all parties concerned.

ANNEX**GUIDELINES FOR PERIODIC TESTING OF IMMERSION SUIT AND
ANTI-EXPOSURE SUIT SEAMS AND CLOSURES**

- 1 Research performed by several Member Governments has demonstrated that the seams and closures of immersion suits and anti-exposure suits experience deterioration over time. The rate and severity of deterioration may vary widely, depending upon the specific components and procedures employed in the manufacture of the suit and the conditions under which the suit is stored. However, even under ideal conditions, the materials and adhesives used have a finite service life and will inevitably experience a reduction in strength and/or loss of watertightness with age.
- 2 The Guidelines for monthly shipboard inspection of immersion suits and anti-exposure suits (MSC/Circ.1047) are very helpful in identifying obvious problems with a suit, but do not adequately address deterioration of seams and closures (zippers, etc.) which may not be readily apparent by visual inspection. Such deterioration can be detected by pressurization of the suit with air, and testing of the seams and closures for leaks with a soapy water solution.
- 3 To ensure the maintenance of adequate strength and watertightness of seams and closures of immersion suits and anti-exposure suits with age, it is recommended that each suit be subjected to an air pressure test such as the following, at intervals not exceeding three years, or more frequently for suits over ten years of age:
 - .1 A suitable head piece, fitted with a means to inject air into the suit, should be inserted into the face orifice of the suit and secured so as to minimize leakage around the face seal. A low-pressure monitoring device, either integral to the fitting for air injection or as a separate device, should also be inserted. If the suit is fitted with detachable gloves and/or boots, the wrists and/or cuffs should be sealed by inserting a short length of suitable diameter plastic pipe and securing the gloves and/or boots with suitable wire ties or hose clamps. The zipper should be fully zipped, and any face flap closed. The suit should then be inflated to a pressure of 0.7 to 1.4 kPa (0.1 to 0.2 psi). If an auxiliary inflatable means of buoyancy is provided, it should be inflated through the oral valve to a pressure of 0.7 kPa (0.1 psi) or until firm to the touch.
 - .2 Each seam and closure of the suit - and each seam, oral tube and attachment points and joint or valve of any auxiliary inflatable means of buoyancy - should then be covered with a soapy water solution containing enough soap to produce bubbles (if leakage is noted at a foot valve to the extent that air pressure cannot be maintained, the valves should be sealed for the test).
 - .3 If leaks are revealed by the propagation of bubbles at seams or closures, the leaking areas should be marked and, after cleaning the suit thoroughly with fresh water and drying it, repaired in accordance with the suit manufacturer's recommendations.

4 It is recommended that the air pressure test be performed at a suitable shore-based facility equipped to make any necessary repairs in accordance with the manufacturer's recommendations. In view of the wide variety of materials and adhesives used in immersion suits and anti-exposure suits, it is strongly recommended that any repairs to a suit be carried out by a facility which has access to the original manufacturer's recommended servicing instructions, parts and adhesives, and suitably trained personnel. The air pressure test may be carried out on board ship if suitable equipment is available.

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MERCHANT SHIPPING NOTICE

Issued by the Merchant Shipping Division, Sri Lanka

MSN 10 /2010

NOTICE TO MASTERS, OFFICERS, TRAINING INSTITUTES, SHIP OWNERS,
MANAGERS, OPERATORS, AND RECOGNISED ORGANISATIONS

Inspection and Testing of Immersion Suits on board Sri Lankan Flag Ships

The monthly inspection of immersion suits required by Regulation 20.7 and 36.1 of Chapter III of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, must be carried out in accordance with the Guidelines for the Monthly Shipboard Inspection of Immersion Suits and Anti-Exposure Suits by Ships' Crews approved by MSC on 28 May 2002 (MSC/Circ.1047).

Moreover, the periodic pressure testing of the immersion suits must be carried out in accordance with the Guidelines for Periodic Testing of Immersion Suit and Anti-Exposure Suit Seams and Closures approved by MSC on 25 May 2004 (MSC/Circ.1114), at intervals not exceeding:

- a. three years for immersion suits which are less than twelve years of age,
- b. two years for immersion suits which are over twelve years of age.

The intervals are counted from the suit's date of manufacture, up to three years for the first periodic testing. Subsequent periodic testing is counted from the date of the last periodic testing.

It is recommended that the periodic testing is performed at suitable shore based facilities equipped to make any necessary repairs in accordance with the manufacturer's recommendations.

Furthermore, it is also acceptable for the periodic pressure testing to be carried out onboard Sri Lankan Flag ships by the ships' crews (as per MSC/Circ.1114), if suitable equipment and trained personnel are available, as follows:

1. The periodic testing of the immersion suits in this case must be carried out, as follows:
 - a) every 30 months (2½ years) onboard by the ship's crew, for immersion suits which are less than ten years of age,
 - b) every year onboard by the ship's crew, for immersion suits which are over ten years of age, and
 - c) every fifth year, at a suitable shore based facility, irrespective of immersion suit's age.

2. The ship must be in possession of the immersion suit Manufacturer's Service Manual and an appropriate Test Kit accepted / recommended by the immersion suits manufacturer. (written acceptance / recommendation should be available onboard)
3. The ship's crewmembers designated to perform the testing shall be trained in the use of the test equipment and the procedures / instructions contained in the manufacturer's Service Manual regarding the periodic testing and the related inspections of the immersion suits. All designated crewmembers shall hold a valid training certificate issued by the test equipment manufacturer.
4. Procedures for the periodic testing and inspection of the immersion suits must be incorporated into the instructions manual for onboard maintenance in accordance with the guidelines contained in Regulation 36 of Chapter III of SOLAS.
5. The results of the inspection and testing of the immersion suits must be recorded in the official log required by Regulation 36.7 of Chapter III of SOLAS. The date of the testing and inspection and the name(s) of person(s) conducting the testing must also be recorded in the ship's official logbook as required by Regulation 36.7 of Chapter III of SOLAS.
6. If, as a result of the onboard periodic testing / inspection, an immersion suit is found to need repair, such repairs must be made at a suitable shore based facility approved by the manufacturer
7. The periodic testing may be conducted without a RO surveyor being present.

Vacuum Packed Immersion Suits (exchange concept) may also be accepted onboard Sri Lankan Flagged Ships on case by case basis provided:

- a. Instructions for, the monthly inspection of the vacuum pack are provided onboard by the immersion suits manufacturer. It is hereby accepted that these instructions substitute the monthly inspection procedure required by the MSC/Circ.1047.
- b. If the inspection indicates that the vacuum pack is damaged, the immersion suit must immediately be either inspected as per the MSC/Circ.1047 or sent for inspection and re-packing to an approved service station.
- c. There is a sufficient number of immersion suits available onboard for drills.

6 July 2010

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