Continuation of MS Notice 5 of 98

M.S. Notice 14 of 1998

Subject : Continuation of M.S. Notice 5 of 98

In continuation of M.S. Notice 5 of 98 dated 4/9.6.98 on the subject of False Distress Alerts on 406 MHz EPIRB, this Notice is intended to inform Ship Owners, Ship Masters, Suppliers & Servicing Stations of Emergency Position Indicating Radio Beacons (EPIRB).

EPIRBs operating on the frequency 406 MHz, which form part of the GMDSS,if installed before 23rd November 1996, should conform to performance standards not inferior to those specified in the Annex to Resolution A.763(18).

1. if installed on or after 23rd November 1996, should conform to performance standards not inferior to those specified in the Annex to Resolution A.810(19).

Further, attention is drawn to Resolution A.814(19) which provides guidelines for the avoidance of False Distress Alerts.

A copy of the relevant Annexes and Guidelines referred to above, are enclosed.

Sd/-

(Capt R.K. Awasthi)

Nautical Surveyor

Resolution A.810(19)

Adopted on 23 November 1995 (Agenda Item 10)

PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EMERGENCY POSITION-INDICATING RADIO BEACONS (EPIRBs) OPERATING ON 406 MHz

THE ASSEMBLY.

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECALLING ALSO regulations IV/7.1.6 and 14.1 of the 1998 amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, concerning radio communications for the global maritime distress and safety system (GMDSS), which require, respectively, that ships be provided with a satellite emergency position-indicating radio beacon (EPIRB) and that such EPIRBs shall conform to appropriate performance standards not inferior to those adopted by the Organization.

RECOGNISING the need to prepare performance standards for float free satellite EPIRBs operating through a polar-orbiting satellite system on 406 MHz to be used in the GMDSS in order to ensure the operational

reliability of such equipment and to avoid as far as practicable adverse interaction between search equipment and other communication and navigation equipment on board ship.

HAVING CONSIDERED the recommendation made by the maritime Safety Committee at its sixty-fifth session:

1. ADOPTS the recommendation on performance standards for Float free satellite emergency position indicating radio beacons (EPIRBs) operating on 406 MHz set out in the annex to the present resolution.
2. RECOMMENDS Government's to ensure that float free satellite EPIRBs operating on the frequency 406 MHz, which form part of the GMDSS:
    i. If installed on or after 23rd November 1996, conform to performance standards not inferior to those specified in the Annex to the present resolution;
    ii. If installed before 23rd November 1996, conform to performance standards not inferior to those specified in the Annex to resolution A.763(18);
    iii. If installed before 4th November 1994, conform to performance standards not inferior to those specified in the Annex to resolution A.763(18), except that they may not be provided with the 1215 MHz homing beacon required by 2.3.14 of Part A thereof;
3. Invites the COSPAS-SARSAT partners to ensure that any amendments to the specification for COSPAS-SARSAT 406 MHz distress beacons are agreed with the organization prior to the adoption;
4. REQUEST the Maritime Safety Committee to ensure that any proposed amendments to this resolution are agreed with the COSPAS-SARSAT partners prior to their adoption.
5. REQUEST ALSO the Maritime Safety Committee to review the code assignment method recommended in 4 of Part B of the Annex to this resolution prior to 1st February 1997;
6. REQUESTS FURTHER the Maritime Safety Committee to keep these performance standards under review and to adopt amendments thereto, as necessary.

Annexure

RECOMMENDATION ON PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EMERGENCY

POSITION-INDICATING RADIO BEACONS (EPIRBs) OPERATING ON 406 MHz

Part A

General

1. INTRODUCTION

The satellite emergency position-indicating radio beacon (EPIRB) should, in addition to meeting the requirements of the Radio Regulations, the relevant ITU-R Recommendations and the general requirements set out in resolution A.694(17), comply with the following performance standards.

2. GENERAL

1. The satellite EPIRB should be capable of transmitting a distress alert to a polar orbiting satellite.
2. The EPIRB should be of an automatic float-free type. The equipment, mounting and releasing arrangements should be reliable, and should operate satisfactorily under the most extreme conditions likely to be met with at sea.
3. The satellite EPIRB should:
    i. be fitted with adequate means to prevent inadvertent activation;
    ii. be so designed that the electrical portions are watertight at a depth of 10 m for at least 5 min. Consideration should be given to a temperature variation of 450C during transitions from the mounted position to immersion. The harmful effects of a marine environment, condensation and water leakage should not affect the performance of the beacon;
    iii. be automatically activated after floating free;

iv. be capable of manual activation and manual deactivation;
v. be provided with means to indicate that signals are being emitted;
vi. be capable of floating upright in calm water and have positive stability and sufficient buoyancy in all sea conditions;
vii. be capable of being dropped into the water without damage from a height of 20 m;
viii. Be capable of being tested, without using the satellite systems to determine that the EPIRB is capable of operating properly;
ix. Be of highly visible yellow/orange colour and be fitted with retro reflecting material;
x. Be equipped with a buoyant lanyard suitable for use as a tether, which should be so arrange as to prevent its being trapped in the ship's structure when floating free;
xi. Be provided with a low duty cycle light (0.75 cd), active during darkness, to indicate its position to nearby survivor and to rescue units.
xii. Not be unduly affected by sea water or oil or both;
xiii. Be resistant to deterioration in prolonged exposure to sunlight; and
xiv. Be provided with a 121.5 MHz beacon primarily forming by aircraft.

4. The battery should have sufficient capacity to operate the satellite EPIRB for a period of at least 48 h.
5. The Satellite EPIRB should be so designed as to operate under any of the following environmental conditions:
   i. ambient temperatures of -20'C to +55'C;
   ii. icing;
   iii. relative wind speeds upto 100 knots; and
   iv. after stowage, at temperatures between -30'C and +70'C.
6. The installed satellite EPIRB should:
   i. have local manual activation; remote activation may also be provided from the navigating bridge, while the device is installed in the float-free mounting;
   ii. be capable, while mounted on board, of operating properly over the ranges of shock and vibration other environmental conditions normally encountered above deck on seagoing ships; and
   iii. be designed to release itself and float free before reaching a depth of 4 m at a list or trim of any angle.

3. DISTRESS FUNCTION

1. When the satellite EPIRB is manually operated a distress alert should be initiated only by means of a dedicated distress alert activator.
2. The dedicated activator should:
   i. be clearly identified; and
   ii. be protected against inadvertent operation.
3. Manual distress alert initiation should require at least two independent actions.
4. The satellite EPIRB should not be automatically activated after being manually removed from the release mechanism.

4. LABELLING

In addition to the items specified in resolution A.694(17) on general requirements, the following should be clearly indicated on the exterior of the equipment:

1. brief operating instructions;
2. expiry date for the primary battery used; and
3. the identity code programmed into the transmitter.

Part B

Satellite signals

1. The satellite EPIRB distress alerting signal should he transmitted on the frequency of 406 MHz using G1B class of emission.

2. The technical characteristics of the transmitted signal and the message format should be in accordance with Recommendation ITU-R M.633.
3. Provision should be included for storing the fixed portion of the distress message in the satellite EPIRB using non-volatile memory.
4. A unique beacon identification code should be made part of all messages.

Until 1 February 1999, this identification code should include a three-digit code for the country in which the beacon is registered, followed by either

1. the trailing six digits of the ship station identity in accordance with appendix 43 of ITU Radio Regulations; or
2. a unique serial number; or
3. a radio call sign.

Preference is given to method .1.

After 1 February1999, all new beacon installations should be in accordance with method .l.*

A. The 121.5 MHz homing signal should:

1. have a continuous duty cycle, except that it may be interrupted for up to a maximum of 2 s during the transmission of the 406 MHz signal; and

2. with the exception of the sweep direction, meet the technical characteristics of appendix 37A of the Radio Regulations. The sweep may be either upward or downward.

*The code assignment method is to he reviewed prior to 1 February 1997.

Resolution A.814(19)

Adopted on 23 November 1995

(Agenda item 10)

GUIDELINES FOR THE AVOIDANCE OF FALSE DISTRESS ALERTS

THE ASSEMBLY

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships.

CONSIDERING problems reported by member Governments in regard to the proper operation of the GMDSS, in particular that false distress alerts are becoming a major obstacle to the efficient operation of search and rescue (SAR) services.

RECALLING that the GMDSS was developed on the basis of resolution 6 of the International Conference on Maritime Search and Rescue, 1979, and that according to that resolution the GMDSS should provide, amongst other things, the essential radio elements of the international SAR plan.

NOTING that the excessive amount of false distress alerts imposes a considerable and unnecessary burden on Rescue Co-ordination Centers (RCCs), may have adverse effects on seafarers confidence in the GMDSS, and could also have a potentially serious impact on real distress situations and on safety of Life at Sea.

BEING AWARE that if a substantive reduction in the number of false distress alerts now occurring is not achieved in the near future, the quality and efficiency of SAR organizations may be jeopardized.

CONSIDERING that an urgent dissemination of some of the problems which have become evident to providers of rescue services would have to educate people and organizations involved and eventually contribute to a reduction in the number of false distress alerts.

CONSIDERING ALSO that administration manufacturers, educators, users, providers of communications and rescue service and all others concerned need guidance on ways and means of reducing false distress alerts.

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its sixty-fifth session,

1. ADOPTS the Guidelines for Avoiding False Distress Alerts set out in the Annex to the present resolution.
2. URGES Governments to bring these Guidelines to the attention of all concerned.

Annexure

GUIDELINES FOR AVOIDING FALSE DISTRESS ALERTS

1. Administration should :

1. Inform ship owners and seafarers about the implications of the rising number of false distress alerts;
2. Take steps to enable ships properly to register all GMDSS equipment and ensure that this registration data is readily available to RCCs
3. Consider establishing and using National enforcement measures to prosecute those who:
    i. Inadvertently transmit of false distress alert without proper cancellation, or who felt to respond to a distress alert due to misuse or negligence;
    ii. Repeatedly transmit false distress alerts and
    iii. Deliberately transmit false distress alerts.
4. Use the International Telecommunication Union violation reporting process for false distress alerts or for failure to respond to a distress alert relayed from shore-to-ship.
5. Ensure that all relevant ship personnel know how GMDSS equipment operates, the importance of avoiding false distress alerts, the steps to be taken to prevent the transmission of such false distress alerts and the procedures to be followed when a false distress alert has been transmitted.
6. Inform type-approval authorities of false distress alert problems, in order to their attention to the testing and alerting functions of radio equipment during the type-approval process.
7. Urge companies installing radio equipment to ensure that relevant ship personnel are made familiar with the operation of installed equipment.
8. Investigate the cause when a specific model of GMDSS equipment repeatedly transmits unwanted distress alerts, and inform the appropriate organizations accordingly;
9. Ensure that GMDSS radio operators be appropriately certificated.

2. Manufacturers, suppliers and installers should:

1. Design equipment for distress alerting so that:
    i. It will not be possible to transmit a distress alert unintentionally;
    ii. The panel for emergency operation is separated from the one for normal operation and is partially fitted with a cover, and the switches on the panel are clearly classified by colouring;
    iii. There are standardized arrangements of operation panels and operational procedures;
2. Design rest features so that the testing of GMDSS equipment will not result in the transmission of false distress alerts;
3. Ensure that any distress alert activation is indicated visually or acoustically, or both, and shows that the equipment is transmitting a distress alert until manually deactivated;
4. Ensure that the satellite, EPIRB position on board, installations (including the release and activation mechanisms) and handing procedures preclude unwanted activation (designing the EPIRB so that

when it is out of its bracket it must also be immersed in water to activate automatically, and so that when operated manually, a two-step activation action is required);
5. Provided clear and precise operational instructions that are easy to understand (maintenance and operational instructions should be separated, and should be written both in English and in any other language deemed necessary);
6. Ensure that when any GMDSS equipment has been installed, the necessary instructions are given to ship personnel, drawing specific attention to operational procedures (a record should be kept that such instructions have been given); and
7. Ensure that supply and installation personnel understand how the GMDSS works and the consequences of transmitting a false distress alert.

3. Trainers and educators should:

1. Ensure that maritime education centres are informed about false distress alert problems and their implications for SAR, the GMDSS, etc, and procedures to be followed if a false distress alert is transmitted and include them in their teaching programmes;

2.Obtain and use actual case histories as examples;

3.Emphasize the need to avoid false distress alerts; and

4.Ensure that no inadvertent transmission of a false distress alert occurs when training on GMDSS equipment.

1. Ensure that all GMDSS certificated personnel responsible for sending a distress alert have been instructed about , and are competent to operate, the particular radio equipment on the ships;
2. Ensure that the person or persons responsible for communications curing distress incidents give the necessary instructions and information to all crew members on how to use GMDSS equipment to send a distress alert;
3. Ensure that as part of each "abandon ship" drill, instruction is given on how emergency equipment should be used to provide GMDSS functions;
4. Ensure that GMDSS equipment testing is only undertaken under the supervision of the person responsible for communication during distress incidents;
5. Ensure that GMDSS equipment testing or drills are never allowed to cause false distress alerts;
6. Ensure that encoded identity of satellite, EPIRBs which are used by SAR personnel responding to emergencies, are properly registered in a database accessible 24 hrs a day or automatically provided to SAR authorities (Master should confirm that their EPIRBs have been registered with such a database to help SAR service identify the ship in the event of distress and rapidly obtain other information which will enable them to respond appropriately);
7. Ensure that EPIRB, Inmarsat and DSC registration data is immediately updated if there is any change in information relating to the ship such as owner name of flag, and that the necessary action is taken to reprogramme the ship's new data in the GMDSS equipment concerned;
8. Ensure that, for new ships, positions for installing EPIRBs are considered at the earliest stage of ship design and construction.
9. Ensure that satellite EPIRBs are carefully installed installed in accordance with manufacturers instructions and using qualified personnel (sometimes satellite EPIRBs are damaged or broken due to improper handling or installation. They must be installed in a location that will enable them to float free and automatically activate if the ship sinks. Care must be taken to ensure that they are not tampered with or accidentally activated. If the coding has to be changed or the batteries serviced, manufacturers requirements must be strictly followed. There have been cases where EPIRB lanyards were attached to the ship so that the EPIRB could not float free; lanyards are only to be used by survivors for securing the EPIRB to a survival craft or person in water);
10. Ensure that EPIRBs are not activated if assistance is already immediately available (EPIRBs are intended to call for assistance if the unable to obtain help by other means and to provide position information and homing signals for SAR units).

11. Ensure that, if a distress alert has been accidentally transmitted, the ship makes every reasonable attempt to communicated with the RCC by any means to cancel the false distress alert using the procedures given in the appendix:
12. Ensure that, if possible, after emergency use, the EPIRB is retrieved and deactivated and
13. Ensure that when an EPIRB is damaged and needs to be disposed of, if a ship is sold for scrap or if for any other reason a satellite EPIRB will no longer be used, the satellite EPIRBs is made inoperable, either by removing its battery and, if possible, returning it to the manufacturer, or by demolishing it.

Note: If the EPIRB is returned to the manufacturer, it should be wrapped in tin foil to prevent transmission of signals during shipment.

Appendix

Instructions for mariners and others* on how to cancel a false distress alert

DSC

1. VHF

1. Switch off the transmitter immediately;
2. switch equipment on and set to Channel 16; and
3. make broadcast to "All Stations" giving the ship's name, call sign and DSC number, and cancel the false distress alert.

Example

All Stations, All Stations, All Stations

This is NAME, CALL SIGN,

DSC NUMBER, POSITION.

Cancel my distress alert of

DATE, TIME UTC,

=Master NAME, CALL SIGN,

DSC NUMBER, DATE, TIME UTC.

2.MF

1. switch off equipment immediately;
2. switch equipment on and tune for radiotelephony transmission on 2182 kHz; and
3. make broadcast to "All Stations" giving ship's name, call sign and DSC number, and cancel the false distress alert.

Example

All Stations, All Stations, All Stations

This is NAME, CALL SIGN,

DSC NUMBER, POSITION.

Cancel my distress alert of

DATE, TIME UTC,

=Master NAME, CALL SIGN,

DSC NUMBER, DATE, TIME UTC.

3.HF

As for MF, but the alert must be cancelled on all frequency bands on which it was transmitted. Hence, in stage 2.2 the transmitter should be tuned consecutively to the radiotelephony distress frequencies inthe 4, 6, 8, 12 and 16 MHz bands, as necessary.

4.Inmarsat-C

Notify the appropriate RCC to cancel the alert by sending a distress priority message via the same CFS through which the false distress alert was sent.

Example of message

NAME, CALL SIGN, IDENTITY NUMBER,POSITION,

Cancel my Inmarsat-C distress alert of

DATE, TIME UTC

=Master +

5.EPIRBS

If for any reason an EPIRB is activated accidentally, the ship should contact the nearest coast station or an appropriate coast earth station or RCC and cancel the distress alert.

6.General

6.1 Notwithstanding the above, ships may use any means available to them to inform the appropriate authorities that a false distress alert has been transmitted and should be cancelled.

6.2 No action will normally be taken against any ship or mariner for reporting and canceling a false distress alert. However, in view of serious consequences of false alerts, and the strict ban on their transmission, Governments may prosecute in cases of repeated violations.