RESOLUTION A.661(16)

Adopted on 19 October 1989
Agenda item 10

PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EMERGENCY POSITION-INDICATING RADIO BEACONS OPERATING THROUGH THE GEOSTATIONARY INMARSAT SATELLITE SYSTEM ON 1.6 GHZ

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,

RECOGNIZING the need to prepare performance standards for float-free satellite EPIRBs operating through the geostationary INMARSAT satellite system on 1.6 GHz in order to ensure the operational reliability of such equipment and to avoid, as far as practicable, adverse interaction between such equipment and other communication and navigation equipment aboard ship,

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

1. ADOPTS the Recommendation on Performance Standards for Float-Free Satellite EPIRBs Operating through the Geostationary INMARSAT Satellite System on 1.6 GHz, the text of which is set out in the Annex to this resolution;

2. RECOMMENDS Member Governments to ensure that float-free satellite EPIRBs operating through the geostationary INMARSAT satellite system on 1.6 GHz conform to performance standards not inferior to those specified in the Annex to this resolution;

3. INVITES INMARSAT to ensure that any amendments in the specification for INMARSAT 1.6 GHz distress beacons be agreed with the Organization prior to their implementation;

4. REQUESTS the Maritime Safety Committee to ensure that any proposed amendments to this resolution be agreed with INMARSAT prior to their consideration by the Assembly.

ANNEX

RECOMMENDATION ON PERFORMANCE STANDARDS FOR FLOAT-FREE SATELLITE EPIRBs OPERATING THROUGH THE GEOSTATIONARY INMARSAT SATELLITE SYSTEM ON 1.6 GHZ

PART A – GENERAL

1 INTRODUCTION

The satellite emergency position-indicating radiobeacon (EPIRB) should, in addition to meeting the requirements of the Radio Regulations, the relevant CCIR Recommendations, the relevant INMARSAT technical requirements, and the general requirements set out in resolution A.569(14), comply with the following performance standards.

2 GENERAL

2.1 The satellite EPIRB should be capable of transmitting a distress alert to a geostationary satellite.

2.2 The equipment should be an automatic float-free type of EPIRB. The equipment should be reliable even under extreme conditions.

2.3 The performance of the float-free arrangements should be in accordance with the requirements of the performance standards for float-free release and activation arrangements for emergency radio equipment, set out in Assembly resolution A.662(16).

2.4 The satellite EPIRB should:

.1 be fitted with adequate means to prevent inadvertent activation;

.2 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 45°C 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;

.3 be automatically activated after floating free;

.4 be continuously provided with the ship's position data for automatic inclusion in the distress message when activated;

.5 be equipped with a search and rescue radar transponder unless integral facilities are included for automatic position updating after activation;

.6 be capable of manual activation and manual deactivation;

.7 be provided with means to indicate that signals are being emitted;

.8 be capable of floating upright in calm water and have positive stability and sufficient buoyancy in all sea conditions;

.9 be capable of being dropped into the water without damage from a height of 20 m;

.10 be capable of being tested without using the satellite system to determine that the EPIRB is capable of operating properly;

.11 be of highly visible yellow/orange colour and be fitted with retro-reflective material;

.12 be equipped with a buoyant captive lanyard suitable for use as a tether, which should be so arranged as to prevent its being trapped in the ship's structure when floating free;

.13 be provided with a low duty cycle light (0.75 cd) activated by darkness to indicate its position for the survivors nearby and rescue units;

.14 not be unduly affected by seawater or oil; and

.15 be resistant to deterioration by prolonged exposure to sunlight.

2.5 The battery should have sufficient capacity to operate:

.1 the distress alerting transmitter for 4 h in accordance with CCIR Recommendation 632 or for at least 48 h if integral facilities are included for automatic position updating; and

.2 any other facilities (e.g. SART and flashing light) for at least 48 h.

2.6 The satellite EPIRB should be so designed as to operate under any of the following environmental conditions:

.1 ambient temperature of −20°C to +55°C;

.2 icing;

.3 relative wind speeds up to 100 knots; and

.4 after stowage at temperature between −30°C and +65°C.

2.7 The installed satellite EPIRB should:

.1 have local manual activation (remote activation may also be provided from the navigating bridge) while the device is installed in the float-free mounting; and

.2 be capable, while mounted on board, of operating properly over the ranges of shock and vibrations and other environmental conditions normally encountered above deck on seagoing vessels.

2.8 Any connection to the EPIRB, e.g. for the purpose of supply of data or power, should be corrosion resistant and protected against accidental disconnection.

3 LABELLING

In addition to the items specified in resolution A.569(14) – General requirements, the following should be clearly indicated on the exterior of the equipment:

.1 brief operating instructions; and

.2 expiry date for the primary batteries used.

PART B – SATELLITE SIGNAL

1 The satellite EPIRB should include facilities to transmit in the 1,644.3–1,644.5 MHz frequency band and, after full implementation of the second generation INMARSAT space segment, in the frequency band 1,645.5–1,646.5 MHz only. Alternatively, the satellite EPIRB distress alert could be transmitted sequentially in the 1,644.3–1,644.5 MHz frequency band and the frequency band 1,645.5–1,646.5 MHz. After full implementation of the second generation INMARSAT space segment, the emission should be limited to the frequency band 1,645.5–1,646.5 MHz only.

2 The technical characteristics of the transmitted signal and the message format should be in accordance with CCIR Recommendation 632.

3 The ship station identity should be made part of all messages and should be in accordance with CCIR Recommendation 585.