

at the crest of the modulation envelope. The radiated peak envelope power is the peak envelope power required at the input of a quarter wave monopole antenna normal to an horizontal earth plane to produce, at the same distance, in an horizontal direction, the same field strength as produced by the equipment under specified conditions.

(2) The radiated peak envelope power shall be measured by means of a substitution method.

(a) The measurement shall be performed with the equipment floating in salt water in its ordinary operating position, in order to simulate the radio frequency properties of the sea. The salt water should be contained in a water tank of at least 1 metre diameter or in a smaller tank with an additional earth plane of at least 1 metre diameter.

(b) The radiated signal shall be measured at a distance of at least 10 metres from the antenna of the EPIRB. It shall be possible to vary the measuring antenna's height above the ground by at least one half wavelength, and the strength of the received signal shall be registered by means of a peak reading indicator.

(c) The measuring receiver shall have a bandwidth of 10kHz.

(d) The height of the measuring antenna shall be varied until maximum signal strength is found.

(e) The EPIRB shall be rotated in the horizontal plane until a minimum reading on the peak reading indicator is found.

(f) The EPIRB shall then be replaced by a substitution antenna which shall be a quarter wave monopole antenna mounted on an earth plane and connected to an unmodulated signal source. The height of the measuring antenna shall be varied until the maximum signal strength is registered. The level of the signal source shall be adjusted to give the same reading of the peak reading indicator as from the EPIRB. The average output power from the signal source is designated as the radiated peak envelope power of the EPIRB. Allowance shall be made for cable attenuation.

(g) The EPIRB connected to the artificial antenna or placed in the test fixture shall then be placed in a climatic chamber, and relative radio frequency output power tests under extreme temperature conditions shall be performed. The battery shall be changed for each test.

(3) The radiated peak envelope power shall for all temperature conditions be at least 200mW both frequencies during and at the end of 48 hours continuous operation.

23. Radiation produced by operation of the test facility—

(1) Radiation produced by operation of the test facility is the radiation at the nominal frequencies when the equipment is being tested.

(2) The EPIRB shall be hand-held with the switch in the test position.

(a) The method of measurement described in clause 22(2) of this Part shall be used, however, the test shall be performed at normal test temperature only.

(b) The transmitter shall be turned in all directions until the maximum radiation is found.

(3) The test facility provided to indicate the correct functioning of the EPIRB shall not produce a peak effective radiated power on each carrier frequency greater than 25 nW.

24. Spurious emission—(1) Spurious emission is emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

(2) Spurious emissions shall be measured on the test site described in clause 22 (2) (a) of this Part.

(3) The measurement shall be performed with the EPIRB immersed in salt water in its normal operating position.

(4) The method of measurement described in clause 22 (2) of this Part shall be used to search for spurious emissions in the frequency bands 108–137 MHz, 156–162 MHz, 406.0–406.1 MHz and 450 —470 MHz.

(5) The measuring receiver shall have a bandwidth of 10 kHz.

(6) The measurement shall only be performed at normal temperature conditions.

(7) The power of any spurious emission component shall not exceed 25 uW on any frequency.

25. Protection of the transmitter—(1) The EPIRB transmitter, when operating, shall not be damaged due to antenna mismatching.

(2) Where appropriate the antenna shall be detached for a period of 5 minutes.

(3) Where appropriate the antenna feed point shall be short circuited for a period of 5 minutes.

(4) Equipment with a non-detachable antenna shall be completely immersed in salt water for a period of 5 minutes with the antenna extended.

(5) The equipment shall operate normally upon completion of tests.

Part III

Emergency Position-Indicating Radio Beacons for Use on Ships Other Than Ships of Classes I, VII and VIII

26. Introduction—(1) This Part of the Schedule sets out the general design and minimum performance requirements for an Emergency Position-Indicating Radio Beacon (EPIRB) operating on 121.5 MHz and 243 MHz, intended for carriage on ships other than ships of Classes I, VII and VIII.

27. Type approval and licensing—(1) The equipment must be type approved by the Ministry of Transport and bear a label showing the type approval number.

(2) The requirements of this Part of the Schedule do not cover equipment intended for compulsory carriage in aircraft which is subject to Civil Aviation Airworthiness Requirements.

(3) Requests for further information and applications for type approval testing can be made to:

The General Manager,
Maritime Transport Division,
Ministry of Transport
PO Box 27–006
WELLINGTON

28. General requirements—(1) In all respects the mechanical and electrical design and construction of the equipment shall conform to good engineering practice. The equipment shall be designed as one integral unit suitable for maritime use.

(2) The exterior of the equipment shall have no sharp edges or projections which could damage inflatable survival equipment, injure personnel or damage their clothing. Controls should be protected to minimise inadvertent activation or deactivation of the EPIRB. The case should be of a conspicuous colour such as safety yellow or international orange.

(3) The equipment shall be constructed such that it can withstand reasonable impact, shock, crush, and vibration forces and will continue to operate properly in accordance with the requirements of this specification.

(4) The equipment, exclusive of water-activated batteries, shall be waterproof. The effects of standing water on the outer surface of the equipment shall have no significant adverse effect upon the performance of the equipment.

(5) The equipment's performance shall not be adversely