

Specification for

Limits and methods of measurement of electromagnetic interference generated by marine equipment and installations

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- British Radio and Electronic Equipment Manufacturers' Association
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- ERA Technology Ltd.
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Supply Industry in England and Wales
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The following bodies were also represented in the drafting of the standard, through sub-committees and panels:

- British Marine Equipment Council
- British Shipbuilders
- Department of Transport (Marine Directorate)
- General Council of British Shipping
- Institution of Electrical Engineers
- Marine Engine and Equipment Manufacturers' Association
- North East Coast Institution of Engineers and Shipbuilders
- Radio and Electronic Officers' Union

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Foreword

This British Standard has been prepared under the direction of the General Electrotechnical Engineering Standards Committee.

It is a revision of BS 1597:1975 which is withdrawn and specifies limits of radio interference to be applied as a type-test for equipment intended for marine installation. The frequency range covered has been extended from 15 kHz to 100 MHz, to 10 kHz to 300 MHz. Additionally, limits of acceptable radio interference at the terminals of ships' receiver antenna feeders have been retained from the previous edition. It is believed that observance of these limits will make a significant contribution to the safe operation of ships.

The operation of electrical and electronic equipment in ships may give rise to rapidly fluctuating currents and voltages; and these may be conveyed to other equipment in the form of electromagnetic interference by conduction or radiation or a combination of both. This standard specifies the level of interference which may emanate from equipment by conduction and radiation and thus provides a degree of protection for equipment the performance of which must not be impaired, e.g. radio receivers, either communication or radio direction finding (RDF); navigational aids such as Omega, Decca Navigator or Loran; automatic pilots; instrumentation and other computer based data systems all of which are essential to the safety and efficient operation of the modern vessel.

Even equipment which complies with this standard may cause interference if it is not installed correctly. It is important to observe the advice and recommendations given in BS 5260 and the "Recommendations for electromagnetic compatibility aboard ships"¹⁾ published by the Institution of Electrical Engineers. Equipment which is susceptible to interference at the levels specified in this standard, when all equipment has been properly installed, should be regarded as being, itself, at fault. For the satisfactory operation of such susceptible equipment special additional protection may be required.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ Part of the "Regulations for the Electrical and Electronic Equipment of Ships", available from the Institution of Electrical Engineers, 2 Savoy Hill, London WC2R 0BS.

Section 1. General

1 Scope

This British Standard specifies limits and describes methods of measurement for the electromagnetic interference generated by electrical or electronic equipment which is intended to form part of a marine installation. Limits of conducted interference are specified for the frequency band 10 kHz to 50 MHz and of radiated interference for the frequency band 30 MHz to 300 MHz.

The standard also specifies the limits and methods of measurement of radio frequency voltage at the receiver terminals of a ship's receiver antenna feeders.

NOTE The titles of publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this standard the definitions relating to electromagnetic interference given in BS 4727-1:Group 09 apply.