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# TECHNICAL SPECIFICATION

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## Requirements for Navigation (Water) Equipment

TS RE 027, Version 1.0

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## VERSION CONTROL

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## 1 General requirements

Technical specification has been prepared and approved by the Telecommunications Regulatory Authority (TDRA) based on the Telecommunication apparatus Type Approval Regime.

Several technical specifications may apply to the equipment. If equipment within the scope of this technical specification also incorporates functions that are covered by another technical specification, the relevant technical specification is applied to each function separately. The influence of one function on the other is taken into account.

## 2 Scope

This technical specification applies to Navigation (Water).

This technical specification defines minimum technical requirements for health and safety, electromagnetic compatibility, efficient use of radio spectrum and additional essential requirements based on the Telecommunication apparatus Type Approval Regime.

Unless the context requires otherwise, the expressions and wordings appearing in the Telecommunication apparatus Type Approval Regime shall have the same meaning described thereto.

## 3 Technical Requirements

### 3.1 Efficient use of radio spectrum

The equipment shall comply with allocated frequency bands given in the National Frequency Allocation Table (NFAT).

- 90-110 kHz: frequency allocation according to EN 61075
- 2,9-3,1 GHz: power ratings according and frequency allocation according to IEC 62388, IEC 60936 and IEC 60945.
- 9,3-9,5 GHz: power ratings according and frequency allocation according to IEC 62388, IEC 60936 and IEC 60945.

The equipment shall meet the requirements of following standard(s):

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- EN 61075 Loran-C receivers for ships - Minimum performance standards - Methods of testing and required test results.
- EN 62388 Maritime navigation and radio communication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results.
- EN 60936-2 Maritime Navigation and Radio communication Equipment and Systems - Radar - Part 2: Shipborne Radar for High-Speed Craft (HSC) - Methods of testing and required test results.

### 3.2 Electromagnetic compatibility

The equipment shall meet the requirements of following standard(s):

- EN 60945 Maritime navigation and Radio communication equipment and systems - General requirements - Methods of testing and required test results.

### 3.3 Health and safety

The equipment shall meet the requirements of Technical specification TS HS 001.

### 3.4 Additional essential requirements

A licence must be obtained before equipment of this type can be used.

### 3.5 Validity of standards

If no issue or revision number is quoted along with the title of a standard, the valid edition should be used. The valid of the standard can be checked on:

- For EN standards:

[http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/rte/index\\_en.htm](http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/rte/index_en.htm);

<http://www.cenelec.eu/>

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- For IEC standards:

<http://www.iec.ch/>