

EU RO Mutual Recognition Technical Requirements

CABLE TRAYS & DUCTS (METALLIC)	Version	0.2
	Adoption Date	1 April 2016
	Application Date	1 October 2016
	Tier	3
This document is subject to controlled issue and can be found here: http://www.euromr.org/technical-requirements *** Uncontrolled if downloaded or printed ***		

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1. PRODUCT DESCRIPTION

1.a General description of the product

Metallic cable trays and ducts suitable for marine use.

1.b Application limitations

- a) Applicable for marine ships as defined in Mutual Recognition provisions Article 10 Regulation on Common Rules and Standards for Ship Inspection and Survey Organisations.
- b) This standard does not cover penetration through class fire divisions.

1.c Intended use

Cable trays and ducts intended to be used in ships' cabling systems necessary for the applications mentioned in 1.b above.

1.d System context

Refer to the item 1.c above.

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2. DESIGN EVALUATION

2.a Engineering evaluation requirements

2.a.i. Technical Requirements

- a) Cable trays and ducts shall be designed and constructed so that in normal use, when installed according to the manufacturer's instructions, they ensure reliable support to the cables contained within. They shall not present any unreasonable hazard to the user or the cables;
- b) Metallic cable trays, ducts, and their accessories shall be robust and shall be of materials that are corrosion-resistant or suitably treated to resist corrosion;
- c) The components shall be designed to withstand the stresses likely to occur during recommended transport and storage;
- d) Cable trays and ducts shall provide adequate mechanical strength';
- e) Cable trays and ducts intended to be used on open decks shall be resistant against environmental forces, such as sea waves, snow, ice-cap loading and others;
- f) The inside of the trays and ducts shall be smooth, and their ends shaped in a suitable manner so as to avoid damage to the cable sheath;
- g) Cable casings shall be supplemented by metallic fixing and strap.

2.a.ii. Technical documents to be submitted

IMPORTANT: The English Language shall be used for all submitted documents.

Prior to tests:

- a) Proposed test program and test schedule;
- b) Description of test specimens and explanation of the selected test sample(s) providing evidence that the selected sample meets the most rigorous and demanding requirements;
- c) Product descriptions, manuals, data sheets, assembly drawings, dimension drawings, etc. clearly identifying the product;
- d) Complete accreditation certificate of the Test laboratory;
- e) Details of production sites;
- f) Product specification;

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- g) Application, working area;
- h) Instructions on fitting, assembly and operation;
- i) QM-certificate according to ISO 9001.

2.b Type testing requirements

Tests to be carried out:

- a) Dimensions shall be checked according to the product information;
- b) Visual inspection that construction surfaces and edges do not damage the cables;
- c) Safe working load (SWL) test according to IEC 61537;
- d) Salt spray test according to ISO 9227 or salt mist test according to IACS UR E10;
- e) Hammer tests according to IEC 60068-2-75;
- f) Test report(s) shall include the following information:
 - Type of product, with type number / serial number(s) and quantity tested;
 - Test specification for the product identified by number, revision and date;
 - Details of test equipment and measuring instruments stating serial numbers and calibration certificates;
 - Names of the test engineer and the engineer approving the report;
 - Ambient environmental conditions during the test;
 - The test results with a description of any failures encountered;
 - Conclusion.

Test specimens shall be selected from production line or at random from stock†. Tests shall be carried out in the presence of the EU RO Surveyor. In cases where the tests are conducted at Nationally Accredited Laboratories, the presence of the EU RO surveyor may be omitted†.

† For further clarification of witnessing of tests and sampling the test specimen(s), refer to paragraphs 6, 7 and 8 of the EU RO "Design Evaluation Scheme" procedure (Appendix V of EU RO Framework Document for the Mutual Recognition of Type Approval found on <http://www.euromr.org/Guidance%20for%20Mutual%20Recognition>)

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3. PRODUCTION REQUIREMENTS

Refer to EU RO "Product Quality Assurance (PQA)" procedure (Appendix VI of EU RO Framework Document for the Mutual Recognition of Type Approval).

4. MARKING REQUIREMENTS

Manufacturers of the approved equipment are, in principle, to mark the product before shipment for identification of approved equipment as per referenced standard. In addition, and as a minimum, the following items to be marked at the suitable place:

- a) Manufacturer's name or equivalent;
- b) Type No. or symbol;
- c) Serial No. and date of manufacture;
- d) Particulars or ratings.

5. TYPE APPROVAL CERTIFICATE CONTENT

The EU RO MR Type Approval Certificate shall contain the minimum information as defined in the "EU RO Framework Document for the Mutual Recognition of Type Approval" - see Appendix I EU RO MR Type Approval Certificate Information.

6. APPROVAL DATE AND REVISION NUMBER

Date	Revision	Comment
31 January 2014	0.0	Accepted by Advisory Board
31 January 2015	0.1	CRF018 – Revision to par. 2.a.ii - Technical documents to be submitted in English; CRF020 – Revision to par. 5 - 'Type Approval Certificate Content'
1 April 2016	0.2	CRF025 – Updated to new MR TR document format incl. par. 8; CRF026/026a – Witness testing & control of test specimen; CRF028 – addition of 6 month application clause.

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7. BACKGROUND INFORMATION / REFERENCES

- a) IEC 61537 Cable management - Cable tray systems and cable ladder systems;
- b) ISO 9227 Corrosion tests in artificial atmospheres - Salt spray tests;
- c) IACS UR E10 Test Specification for Type Approval;
- d) IEC 60068-2-75 Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests.
- e) EU RO Framework Document for the Mutual Recognition of Type Approval.

8. MAINTENANCE / CLARIFICATION OF TECHNICAL REQUIREMENTS

Anyone wishing to propose changes to this document or request clarification of technical issues should contact the EU RO MR Group Secretariat in the first instance: Secretariat@euomr.org.

Review and approval of change requests shall follow the EU RO MR Maintenance Process detailed in the EU RO Framework Document for the Mutual Recognition of Type Approval: <http://www.euomr.org/Guidance%20for%20Mutual%20Recognition>.

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