

EU RO Mutual Recognition Technical Requirements

GASKETS AND SEALS FOR PIPING SYSTEMS	Version	0.0
	Adoption Date:	1 January 2018
	Application Date:	1 July 2018
	Tier	6
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1. PRODUCT DESCRIPTION

1.a General description of the product

Gaskets and seals of rubber and plastic materials for piping systems are intended for sealing pipe connections.

1.b Application limitations†

The application being limited to sealing steel pipe connections for piping systems, which are not required to having reaction-to-fire performance due to the media being conveyed and areas the pipeline pass.

Gaskets for piping systems penetrating areas such as accommodation, service spaces and machinery spaces being outside the scope of the Technical Requirement.

† The EU MR type approved product is generally not used as a stand-alone product, but integrated as component in a sub-system or system. When a product is presented with an EU RO MR Type Approval Certificate for given application, its acceptability with regards to conditions defined in 1b, 1c and 1d of this Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

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1.c Intended use

The gaskets and seals intended to be used in piping systems necessary for the applications mentioned in 1.b.

1.d System context

Refer to the item 1c.

2. DESIGN EVALUATION

2.a Engineering evaluation requirements

2.a i. Technical Requirements

The gaskets and seals intended for sealing in piping systems shall be manufactured so that the type testing requirements indicated in the para. 2.b are to be complied with. Materials containing asbestos are prohibited for the manufacture of gaskets and seals. Gasket and seals for piping systems shall be compatible with the pipes to which they are attached, in respect of their strength, and shall be suitable for effective operation at the maximum working pressure and rated flow that would be experienced in service; Gasket and seals for piping systems shall be designed and manufactured in accordance with recognized standards such as ISO standards and API specifications.

2.a.ii. Technical documents to be submitted

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

- a) Declaration of Performance including temperature rating, fluid compatibility and mechanical main parameters (e.g. gasket factor "m" and min. design seating stress "Y" values as per ASME VIII-1 Appendix 2, or equivalent);
- b) Manufacturer's instructions and recommendations for use.

2.b Type testing requirements

The following type tests are to be conducted in accordance with the indicated standard to verify arrangement and design:

- a) Effect of liquids, ISO 1817;
- b) Accelerated ageing, ISO 188;
- c) Compression set, ISO 815-1, ISO 815-2;

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- d) Test specimens shall be selected from the production line or 'at random' from stock;
- e) 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; †

Type tests shall be carried out as per the referenced standard.

†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>)

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) Material type;
- e) Temperature rating.

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 of EU RO MR Type Approval Certificate Information.

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6. APPROVAL DATE AND REVISION NUMBER

Date	Revision	Comment
2018-01-01	0.0	Approved by EU RO MR Steering Committee

7. BACKGROUND INFORMATION / REFERENCES

- a) 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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