

# ***Product Evaluation Process (PEP) – Instruction Manual***

## **General**

The *Product Evaluation Process* (PEP) outlines the principle for determining the possibility developing EU ROs Mutual Recognition Technical Requirements (TRs) for a defined product. Under this assessment process the eligibility of a product is evaluated by a set of questions developed by the EU RO MR Group in setting out basic prerequisites. The PEP is an iterative process in which the Classification Rules of all EU ROs are screened with respect to the product including application cases, respectively under system integration considerations.

As a starting point the prerequisite for developing EU ROs MR TR is the existence of applicable Classification Rules by at least one EU RO.

The manufacturer may use the PEP for a preliminary check of the potential eligibility of a product against any EU RO's Rules and as a prerequisite for the development of Technical Requirements. Final evaluation is carried out by the EU RO MR Group against all EU RO's Classification Rules.

Definition of terminology used in this instruction manual can be found in *EU RO Framework Document for the Mutual Recognition of Type Approval*.

The PEP distinguishes three evaluation levels (Basic, Product and System) that are explained in the following.

In order to facilitate an efficient application of PEP, it is recommended to first consider the *Preparation* phase before embarking on the PEP.

## **Preparation phase**

Before initiating the PEP the following work should be performed by the manufacturer:

- Prepare a clear product description including system integration cases (these descriptions should be supplemented by references to applicable rule requirements for the product, as identified in Basic evaluation question (1));
- Utilize a standard terminology (e.g. no brand names);
- If applicable: provide a list of maritime related service applications;
- Check whether EU ROs Mutual Recognition Technical Requirements for this product already exist (<https://www.euromr.org/technical-requirements>);
- Check whether the product is currently subject to individual Survey and Certification by any EU RO.

## **PEP Questions**

During the *basic evaluation* the general feasibility of developing MR technical requirements (TR) for the product is assessed without investigating any further details, for instance system integration.

It is noted that *product* and *system evaluation* questions are applied in an iterative process in view of specifying the scope of application when developing the Technical Requirements.

## **Basic evaluation**

In basic evaluation the meaning of the term “Not Eligible” is twofold:

- a) No specific Classification Rule requirements are applicable for using the product onboard of ships, or;
- b) The product is not eligible for the development of MR TRs.

### ***Q1 - Do any of the EU RO have Classification Rules for the product?***

Mutual Recognition Technical Requirements can only be developed if at least one EU RO has Classification Rules for the product under consideration. No TRs need to be developed for a product for which none of the EU ROs have Classification Rules.

### ***Q2 - Are the technical standards of ROs identical or very similar, e.g. referring to the same or to equivalent internationally recognised testing standards (like IEC, ISO etc.)?***

This question refers to comparability of technical standards and the underlying safety philosophy of EU RO's Classification Rules regarding the product under consideration. MR TRs may not be eligible in case of deviating underlying safety philosophies.

### ***Q3 - Is the product exclusively subject to Statutory Certification, e.g. SOLAS, MARPOL, EU-MED?***

EU RO MR is applicable to pre-defined Certification processes under Ship Classification Rules only and any application or duplication with other certification schemes shall be avoided. Subsequently, a product subject to statutory certification requirements only is not eligible for MR if no Classification Rules exist.

## **Product-level evaluation**

The product level evaluation considers both the type of product and the corresponding Classification Rule requirements for the product depending on the service application. “Eligible” means that the product may be considered for developing MR TRs depending on application case considerations (*Application limitation*). “Not Eligible” means that either the product or the specific product application case may not be considered.

### ***Q4 - Is the product an off-the-shelf/ready-to-use item, used in well established operational context?***

Newly developed products or products used in new operational context require individual consideration because of lack operational experience. Typically, such experience is available for ready-to-use products operating in a well-established context for which standard marine operational conditions and service applications are known and considered in design and manufacturing.

### ***Q5 - Are there Classification Rules of at least one EU RO which require ship specific design evaluation or engineering evaluation to be carried out by the EU RO classing the ship?***

Classification Rules for the product require ship specific evaluation or engineering evaluation for each individual product considering detailed information on the service application, working environment,

etc. Without ship specific design review requirements, a product may be eligible for MR TRs development in this application case.

**Q6 - Are there Classification Rules of at least one EU RO which require survey of the product to be carried out by the EU RO classing the ship?**

Classification Rules for the product require survey for each individual product manufactured under consideration of the service application. Without survey requirements for an individual product, it may be eligible for TR development.

## **System-level evaluation**

The system-level evaluation considers the product integrated in various systems and evaluates the eligibility for developing TRs. Similar to the Product level evaluation, an iterative screening of EU ROs Classification Rules is performed on system integration level (ship system including product) to select all cases where the development of TRs is possible. "Eligible" means that the product may be considered for developing MR TRs depending on application case (*Application limitation*).

**Q7 - Is the product part of an essential services or a safety critical system (e.g. IACS UI SC 134)?**

Q7 needs to be considered in conjunction with Q8. Q7 focus on the identification of all cases where the product is used in a safety critical system, i.e. essential service as defined in IACS UI SC 134. For those cases identified evaluation is continued with Q8.

**Q8 - Does a failure of the product adversely affect the system?**

Follow-up of Q7. This question considers safety criticality of the product integrated into the system, i.e. the effect(s) of a product failure with respect to performance of the essential service. No adverse effect may allow the development of MR TRs.

**Q9 - Is the product to be additionally tested according to a specific system to verify final product functionality?**

Screening of the EU ROs Classification Rules to identify all cases where final product functionality can only be tested in the system and thus final certification is only possible after completion of this in-situ testing. Product and in-situ testing need to be performed by the Classification Society classing the ship. Required in-situ testing is considered in *Application limitation* in MR TRs.