

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Rudder angle indicator

with type designation(s)

Rudder Angle Indication System

Issued to

Emri A/S

Herlev, Denmark

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2017/306,**

item No. MED/4.20. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res.

A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

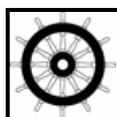
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-06-20**.

Issued at **Hamburg** on **2017-06-21**

DNV GL local station:
Copenhagen

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
Head of Notified Body

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

The EMRI Rudder Indication System consists of the following rudder feedback units, supply & amplifiers boxes and indicators.

4 different types of Rudder Feedback Units are available:

RFU33A: Feedback Unit with link arm, single pot., drawing 4-7808-1
RFU32A: Feedback Unit with link arm, dual pot., drawing 4-7808-2
RFB33A: Feedback Unit with belt drive, single pot., drawing 4-7808-3
RFB32A: Feedback Unit with belt drive, dual pot., drawing 4-7808-4

2 different types of Supply & Amplifier Boxes are available:

SAB10-110: Rudder Indicator Supply & Amplifier Box, 110VAC.
SAB10-230: Rudder Indicator Supply & Amplifier Box, 230VAC.
Drawing: 4-7803

6 different types of Rudder Indicators are available:

RIB51X: 50-0-50 Rudder Indicator, 148x148, drawing 4-7331-1
RIB52X: 50-0-50 Rudder Indicator, 148x148, drawing 4-7331-2
RIF511-RG: 50-0-50 Rudder Indicator, 216x216, drawing 4-5146-1
RIF521-RG: 50-0-50 Rudder Indicator, 216x216, drawing 4-5146-3
TPL510: 45-0-45 Panorama Indicator, ø420, drawing 4-7805-1 (Rev. B)
TPL510-D: 45-0-45 Panorama Indicator w. dim., ø420, drawing 4-7805-2 (Rev. B)

Application/Limitation

None

Type Examination documentation

Tests carried out

Applicable tests according to ISO 20673 (2007), IEC 60945 (2002) incl. Corrigendum 1 (2008), IEC 62288 (2014) and IEC 61162 series.

Marking of product

According to Article 10 of the Council Directive (MED):

- The wheel mark shall be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.
- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorised representative.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.

END OF CERTIFICATE