



Marine & Offshore

Certificate number: 34433/B0 BV

File number: AP4410

Product code: 4441H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Kongsberg Maritime Finland Oy
RAUMA - FINLAND

for the type of product

ALARM AND MONITORING SYSTEMS
Condition Monitoring System for Azimuth Thrusters

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC code : 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 10 Dec 2024

For Bureau Veritas Marine & Offshore,

At BV TURKU (ABO), on 10 Dec 2019,

Roger Robertsson



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

The **Rolls-Royce Condition Monitoring** System lists informations of the thrusters operations.

1.1 - Approval range:

The Rolls-Royce Condition Monitoring System includes:

- Condition Monitoring Unit (CMUCabinet: FAG DTECT X1)
- Vibration Sensors (FAG: Small Accelerometers 100mV/g)
- Data interface between vessel (CMU) and land RR CMS Competence Center via VPN, internet or e-mail.

1.2 - Software list:

Type	Version
Configuration manager	4.10.2.xxxx
Data link	4.10.2.xxxx
Notify link	4.8.4.xxxx
Remote server	4.8.4.xxxx

2. DOCUMENTS AND DRAWINGS :

- 6460862-0-000: CMS Communication
- 7361722-B-011RevA: Overview diagram, dated 12/02/2013

3. TEST REPORTS :

- EMC Test Report (CMU cabinet only): 262415-1, issued by SGS Fimko Oy dated 04/02/2011
- Environmental Test Report (CMU cabinet only): A0635VR01A, issued by Insta DefSec Oy dated 07/02/2011
- Tests report N°A0635VR01A, Ver. A, dated 02.Jul.2011.

4. APPLICATION / LIMITATION :

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.
- 4.2 - The equipment fulfils the EMC requirements for installation on General Distribution Zone.
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**.
- 4.4 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Regulations under the supervision of a Society's Surveyor.
- 4.5 - Only Hardware and Firmware / Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- 4.6 - The above equipment is not intended to be used in Machinery Protection or Safety Related Systems. To be used for Category I Systems only.
- 4.7 - Factory Acceptance and On-board Tests are to be performed in accordance with requirements for Category I Equipment.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The **Condition Monitoring System** are to be supplied by **Rolls-Royce Oy Ab** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.
- 5.3 - **Rolls-Royce Oy Ab** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **Kongsberg Maritime Finland Oy** declared to Bureau Veritas the following production site(s):

Kongsberg Maritime Finland Oy
Rolls-Royce Oy Ab
Suojantie 5
26100, Rauma, FINLAND

6. MARKING OF PRODUCT :

6.1 - Trade name.

6.2 - Date of manufacture and serial number.

6.3 - Equipment type or model identification under which it was type-tested

7. OTHERS :

7.1 - It is **Kongsberg Maritime Finland Oy**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate No. 34433/A0 BV issued on 14 Oct 2014 by the Society.

***** END OF CERTIFICATE *****