

TYPE EXAMINATION CERTIFICATE

This is to certify:**That the Control and Monitoring System**with type designation(s)
BZA-SAM Software Version A500 / Status 20170703

Issued to

Siemens AG
Erlangen Bayern, Germanyis found to comply with
IEC 60092-504 Ed. 4.0 (2016-09) Electrical installations in ships – Part 504: Automation, control and instrumentation
IACS UR E22 Rev. 2 (June 2016) On Board Use and Application of Computer based systems

Application :**see page 2**Issued at **Hamburg** on **2017-09-26**This Certificate is valid until **2022-09-25**.DNV GL local station: **Augsburg**for **DNV GL**Approval Engineer: **Andrea Grün**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Examination Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-026324-1**
Certificate No: **TAA00001DN**

Product description

Fuel Cell Safety System

FCSS

BZA-SAM Software Version A500 / Status 20170703

SIMATIC Manager

Software Version Tools V 5.53 SERVICE PACK 4; Stat od Correction K5.5.4.11

Minimum Hardware Configuration:

CPU 414-2DP PLC up Firmware V 5.x

2xSimatic S7-400 Digital Input Module 32 Digital Input SM421; DC 24 V

3xSimatic S7-400 Digital Output 16 Digital Output SM422; DC 24 V, 2 A

Tests and Evidence regarding Requirement Class 4 according IEC 60092-504 Ed. 4.0 (2016-09) Electrical installations in ships – Part 504: Automation, control and instrumentation.

Application/Limitation

Changes in parameters are permitted only with approval.

Documents for all applications on board to be sent for approval.

When the approved software is revised (affecting all future deliveries) DNV GL is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Type Examination documentation

Test reports:

- BZA-SAM_ LOTR-DNVGL_TAA00001DN_20170925_Rev01 dated 26-09-2017

Technical Documentation:

- BZA-SAM_ LOTD-DNVGL_TAA00001DN_20170925_Rev01 dated 26-09-2017

Tests carried out

Applicable tests and evidence according to

- IEC 60092-504 Ed. 4.0 (2016-09) Electrical installations in ships – Part 504: Automation, control and instrumentation
- IACS UR E22 Rev. 2 (June 2016) On Board Use and Application of Computer based systems

Marking of product

Siemens BZA-SAM Software Version A500.

Certificate Retention Survey

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.

Periodical survey is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE