FOUNDED 1862

CERTIFICATE NUMBER
13-LD1011041-PDA

DATE
07 June 2013

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of

ABB OY, MEDIUM VOLTAGE PRODUCTS - VAASA

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Protection Relay**

MODEL: **REA 10_Arc Fault Protection System**

This Product Design Assessment (PDA) Certificate 13-LD1011041-PDA, dated 07/Jun/2013 remains valid until 06/Jun/2018 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Jean-Claude G. Dennemont
Engineer

ABB OY, MEDIUM VOLTAGE PRODUCTS
MUOTTITIE 2 A
VAASA
FIN 65320
Finland

Product: Protection Relay

Model: REA 10_Arc Fault Protection System

Intended Service:
Provision of fast trip commands to all circuit breakers that may feed an arc fault in low voltage or medium voltage air insulated metal-clad switchgears. Capability is in addition to the System Protection requirements of 4-8-2/9 of the ABS Steel Vessel Rules 2013.

Description:
Detects light generated by an arc fault and provides signalling to trip incoming circuit-breaker or breakers by high speed semiconductor trip outputs. System comprises the REA 101 Arc Protection Relay that may operate independently or with other REA 101 units or REA 103, REA 105 and REA 107 extension units utilising fiber or lens sensor inputs for light detection. Fast three phase and two phase and neutral overcurrent detection and signalling capability is incorporated in the REA 101 Arc Protection Relay.

Ratings:
110/240VAC 50/60Hz, or 110/250VDC; 1/5A; -10C to +55C; IP20 (REA101 with front cover IP54)

Service Restrictions:
Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
The REA 10_Arc Fault Protection System is assigned System Category I in accordance with Rule 4-9-6/9.1 of the Rules for Building and Classing Steel Vessels 2013. Accordingly the following documentation is to be kept and made available to ABS on request: i. final test reports of the finished product, ii. documentation of modifications to program contents and data and version changes to the software with details of the software modification procedure.

Notes / Drawings / Documentation:
Type Test Reports 1MRS080759, 1MRS082100A, Test reports 1052822, 227397B; VTT Test reports VTT-S-02975-12, VTT-S-00657-13

Term of Validity:
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STANDARDS

ABS Rules:
The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. The Rules applicable to this assessment are: 2013 Steel Vessel Rules 1-1-4/7.7, 4-8-3/1.7, 4-8-3/1.17.1, 4-9-6/9.1, 4-9-7/Table 9

National:

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NA

International:
IACS UR E10 Rev5:2006

Government Authority:
NA

EUMED:
NA

Others:
NA