



CERTIFICATE NUMBER

09-HS527739-PDA

DATE

23 November 2009

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
POWER STANDARDS LAB - ALAMEDA

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. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Power Monitoring Unit

MODEL: PQube with modules PS1, ETH1, CT4, XCT4

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/Table 2
2008 MODU Rules: 43-3-3/Table 1

OTHER STANDARD: UL File No. E220936 30 Jun 08;; TUV R72080772 (3 Jun 08), ISA-82.02.01 (IEC 61010-1 MOD),
CAN/CSA-C22.2 No. 61010-1(2001);

AMERICAN BUREAU OF SHIPPING

Hans P. Haendler

Engineering Type Approval Co-ordinator

POWER STANDARDS LAB

1201 MARINA VILLAGE PKWY, #101
ALAMEDA
CA 94501
United States
Telephone: 510-522-4400
Fax: 510-522-4455

Product: Power Monitoring Unit
Model: PQube with modules PS1, ETH1, CT4, XCT4

Intended Service:
Marine & Offshore Applications - Electric AC Power Monitor

Description:
Electric energy meter and power quality disturbance monitor/recorder.
PS1: Power Supply Module
ETH1: Ethernet Module
CT4: Current Sense Module
XCT4: Current Transformer Interface Module
Power Monitoring Equipment Dwg No. 850-000020, Rev.01

Ratings:
Voltage Monitoring: up to 690V L-L (400V L-N) 50/60/400 Hz Nominal;
Power: from 24-48VDC/24VAC, or optional 100-240VAC Power Supply;

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:
Enclosure is to comply with 4-8-3/Table 2 of the SV Rules or 4-3-3/Table 1 of the MODU Rules.

Notes / Drawings / Documentation:
This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

Term of Validity:
This product/model is covered under Product Design Assessment (PDA) Certificate # 09-HS527739-PDA, dated 23/Nov/2009. This PDA Certificate expires 22/Nov/2014. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.

STANDARDS

ABS Rules:
2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/Table 2
2008 MODU Rules: 43-3-3/Table 1

National:
UL File No. E220936 30 Jun 08;

International:
TUV R72080772 (3 Jun 08), ISA-82.02.01 (IEC 61010-1 MOD), CAN/CSA-C22.2 No. 61010-1(2001)

Government Authority:

POWER STANDARDS LAB

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NA

EUMED:

NA

Others:

NA