



CERTIFICATE NUMBER
15-HS1360732-PDA

DATE
26 May 2015

ABS TECHNICAL OFFICE
Houston SED Machinery - Piping
& Electrical Sys.

CERTIFICATE OF DESIGN ASSESSMENT

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

BINSFELD ENGINEERING INC.

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: **Power Meter**

Model: **TorqueTrak TPM2**

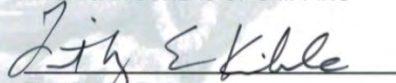
This Product Design Assessment (PDA) Certificate 15-HS1360732-PDA, dated 26/May/2015 remains valid until 25/May/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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


Tim Kimble
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

BINSFELD ENGINEERING INC.
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Email: dan@binsfeld.com
Web: www.binsfeld.com

Tier: 2 - PDA Issued

Product: Power Meter

Model: TorqueTrak TPM2

Intended Service:

Marine Application - Measure Torque And Horsepower On Rotating Shafts. Example: Propeller Shaft

Description:

TorqueTrak TPM2 - Torque and Power Monitoring System is a rugged precision instrument designed for continuous measurement and monitoring of true mechanical torque and/or power on a rotating marine propeller shaft. Transfer of supply power and measurement data between stationary and rotating parts is done through non-contact inductive coupling, so there are no wear surfaces. Everything mounts externally. Shaft modification and machine disassembly are not required. The all-digital design is inherently immune to electrical noise. And the RS-422 serial data output signal is ideal for long distance error free data transmission from the instrument to the data processing and display equipment. Setup and Calibration are accomplished using the Binsfeld software installed on the user's computer.

Rating:

Input Power: 10-30VDC (15 W Max, 10 W Nominal);
Resolution: 15 bits;
Sampling Rate: 9.375 to 4800 samples/sec;
Operating Temperature: -40 °C to 70 °C

Service Restriction:

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 Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

- (1) Installation of receiver module is to be in compliance with 4-8-3/1.11 of the SVR with regards to IP Protection.
- (2) Installation as per Binsfeld TorqueTrak TPM2 User's Guide.

Notes/Drawing/Documentation:

Drawing No. Copy of TPM2_CNM Evolution, TPM2, Revision: -, Pages: 1
Drawing No. RS-422 Communications Specification Manual, RS-222 Manual, Revision: -, Pages: 1
Drawing No. TT-TPM2_Data Sheet_B-1, TT and TPM2 Datasheet, Revision: -, Pages: 1
Drawing No. TorqueTrak TPM2 Manual_A, TPM2 User's Manual, Revision: -, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 - 2015 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Steel Vessels: 4-8-3/1.11;

Steel Vessels Under 90 Meters (295 feet) in Length: 4-6-1/15;

Offshore Support Vessels (OSV Rules): 4-8-3/1.11;

Rules for Conditions of Classification, 2015- Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Drilling Units: 4-3-1/15;

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA