



CERTIFICATE NUMBER

14-HS1203281B-PDA

DATE

04 July 2014

ABS TECHNICAL OFFICE

Houston OED - Equipment

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
CHROMALOX, INC. - LA VERGNE

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: **Heating Cable, Self-Regulating Heating Cable**

MODEL: **SRL, SRL/S, SRM/E, SRM/ES, & SRS**

This Product Design Assessment (PDA) Certificate 14-HS1203281B-PDA, dated 04/Jul/2014 remains valid until 03/Jul/2019 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

Mohamed C Boukamcha

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-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

CHROMALOX, INC.

1347 HEIL QUAKER BLVD.

LA VERGNE

TN 37086

United States

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MA Certificate No. 11-JE1992489-X**Tier: 2****Product:** Heating Cable, Self-Regulating Heating Cable**Model:** SRL, SRL/S, SRM/E, SRM/ES, & SRS**Intended Service:**

Marine & Offshore Applications for Safe and Hazardous Locations.

Description:

Electrical Self-Regulating Heating Cables for Pipe Heating, De-icing and Anti-icing.

Hazardous Locations: Class I, Division 2, Groups B, C & D; Class II, Division 2, Groups F & G; Class III, Division 2 hazardous (classified) locations.

Ratings:

SRL & SRL/S: Maximum Maintain Temperature: 65 °C (150 °F);

Maximum Exposure Temperature (Power Off): 85 °C (185 °F);

SRM/E, SRM/ES & SRS: Maximum Maintain Temperature: 150 °C (302 °F) & 65 °C (185 °F); Maximum Exposure Temperature (Power Off): 215 °C (420 °F); Voltage: 120V or 240V; Type 4X; Output: W/ft @ 50 °F;

Minimum Installation Temperature: - 40 °F;

Service Restrictions:

Unit Certification is not required for this product.

Comments:

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

Refer to PDA 14-HS1203281A-PDA and 14-HS1203281C-PDA for associated enclosures & accessories.

Notes / Drawings / Documentation:

Supporting Documentation:

Dwg. 143-562307-000 Rev. 7 Engineering Data-SRM/E Heating Cable (2 sheets);

Dwg. 143-562520-000 Rev. 7 Engineering Data-SRL/ Heating Cable;

Dwg. 143-562520-000 Rev. 5 Engineering Data-SRL/ Heating Cable

Electrical Heat Trace Cable Systems for Hazardous Locations;

Dwg. 143-562563-000 Rev. 1 Engineering Data-SRS Heating Cable;

Dwg. 143-562568-000 Rev. 0 Engineering Data SRM/ES Heating Cable (2 sheets);

Dwg. 143-562567-000 Rev. 0 Engineering Data SRL/S Heating Cable (2 sheets);

Dwg. 160-562581-000 Rev. 1 SR Grommet Insert;

FM Approval Reports No. 3004593 Class 3770, SRL, SRL/S, SRM/E, SRM/ES and SRS Self-regulations;

Dwg. 143-562563-000 Rev. 0 Engineering Data-SRS Heating Cable;

Term of Validity:

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STANDARDS**ABS Rules:**

Rules for Conditions of Classification, Part 1, 2014 Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Rules for Building and Classing Steel Vessels 4-8-3/1.1, 1.7, 13.1;

Rules for Conditions of Classification, Part 1, 2014 Offshore Units and Structures 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Drilling Units 4-3-3/9.1;

National:

FM Report 3004593 (3 Sept 03), ANSI/IEEE 515 (1997), FM Class 3600 (1998), FM 3611 (1999), ANSI/NEMA 250 (1991);

International:

NA

Government Authority:

NA

EUMED:

NA

Others:

NA