



CERTIFICATE NUMBER	19-HS1897920-PDA
EFFECTIVE DATE	20-Sep-2019
EXPIRY DATE	19-Sep-2024
ABS TECHNICAL OFFICE	Houston ESD - Electrical

CERTIFICATE OF Product Design Assessment

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

TIDELAND SIGNAL CORP.

located at

7100 BUSINESS PARK DRIVE SUITE B, HOUSTON, TX, United States, 77041

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 Marine Signaling Lantern

Model MLED-180 HI Ex and MLED-150Ex

This Product Design Assessment (PDA) Certificate remains valid until 19/Sep/2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping
Hyun Young Son,Engineer/Consultant

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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

TIDELAND SIGNAL CORP.

7100 BUSINESS PARK DRIVE SUITE B

HOUSTON TX

United States 77041

Telephone: 713-681-6101

Fax: 713-682-4635

Email: dalew@tidelandsignal.com

Web: tidelandsignal.com

Tier: 2 - PDA Issued

Product: Marine Signaling Lantern
Model: MLED-180 HI Ex and MLED-150Ex
Intended Service:
Marine and Offshore Applications.

Description:
Marine Signal Lantern: MLED-180 HI Ex and MLED-150Ex - Full monitor and control capability with user selectable power settings and flash characters.

Rating:
Voltage: 24 VDC (MLED-180 HI Ex), 9 - 36 VDC (MLED-150Ex)
Power Consumption: <40 W (MLED-180 HI Ex), up to 20 W (MLED-150Ex)
Range: 15 NM (MLED-180 HI Ex), 10 NM (MLED-150Ex)
Operating Temperature: -40° to 60°C
Enclosure: IP 66
Hazardous Area Rating:
II 2 G or II 2 D or II 2 GD
Ex db IIC or IIB T3- T6 Gb
Ex db eb IIC or IIB T3-T6 Gb
Ex tb IIIC T3-T6 Db

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.

Marking to include the following: "Manufactured by TECHNOR ITALSMEA" as per IECEx Certificate INE 15.0031X and INERIS 01ATEX0019X

Notes/Drawing/Documentation:
Drawing No. 010.1190-DWG, Lantern Assembly MLED-150 EX, Revision: P, Pages: 1
Drawing No. 010.1216-DWG, DWG, Lantern Assy MLED-180HI EX, Revision: D, Pages: 1
Drawing No. 0101190-00 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 0101216-00 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 0111243-00, Operation Manual MLED-150EX Lantern with MaxiHALO-150 Marine LED Flasher, Revision: G, Pages: 1
Drawing No. 0111251-00, Operation Manual MLED-180HI EX Lantern w/MaxiHALO-180HI Marine LED Flasher, Revision: B, Pages: 1
Drawing No. 0120060-00, TideLanad MLED-180HI EX Marine Signal Lantern 012.0060.00, Revision: C, Pages: 1
Drawing No. 1202.0, Yellow, Revision: -, Pages: -
Drawing No. 1596.2, Red, Revision: -, Pages: -
Drawing No. 4282.4, Green, Revision: -, Pages: -
Drawing No. 751.1105-DWG, Flasher Assembly MaxiHALO-150, Revision: V, Pages: 1
Drawing No. 7511105-00 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 7511105-01 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 7511105-03 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 7511105-04 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 7511125-00 BOM, TideLand Bill of Material Report for Organization, Revision: -, Pages: -
Drawing No. 7511125-DWG, Flasher Assy MLED-180HI, Revision: E, Pages: 1
Drawing No. IECEx_INE_15.0031X, IECEx Certificate of Conformity, Revision: -, Pages: -

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Tier: 2 - PDA Issued

Drawing No. INERIS 01ATEX0019 X- issue 8, Attestation D'Examen UE De Type, Revision: -, Pages: -
Drawing No. Intensity Table, Lighted Beacons Intensity/Range Table for Daylight, Revision: -, Pages: -
Drawing No. MLED-150 White, MAXIHALO-180, Wht, Revision: -, Pages: -
Drawing No. MLED-150-Ex-Lantern, MLED-150Ex 10NM External Powered Marine Lantern, Revision: -, Pages: -
Drawing No. MLED-180, Omnidirectional Plot, Revision: -, Pages: -
Drawing No. MLED-180HI-Ex-Lantern, MLED-180 Ex External Powered Marine Lantern, Revision: -, Pages: -
Reference Document No. E200 Part 0, IALA Recommendation E-200-0 on Marine Signal Lights Part 0 - Overview Edition 1, Revision: -, Pages: -
Reference Document No. E200 Part 1, IALA Recommendation E-200-1 on Marine Signal Lights Part 1-Colours Edition, Revision: -, Pages: -
Reference Document No. E200 Part 2, IALA Recommendation E-200-2 on Marine Signal Lights Part 2-Calculation, Definition and Notation, Revision: -, Pages: -
Reference Document No. E200 Part 3, IALA Recommendation E-110 for the Rhythmic Characters of Lights on Aids to Navigation, Revision: -, Pages: -
Reference Document No. E200 Part 4, IALA Recommendation #-400-4 on Marine Signal Lights Part 4, Revision: -, Pages: -
Reference Document No. E200 Part 5, IALA Recommendation E-200-5 on Marine Signal Lights Part 5, Revision: -, Pages: -

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 - 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
Steel Vessels 4-8-3/Table 2, 4-8-4/27.5.1, 4-8-3/13.1
Steel Vessels Under 90 Meters (295 feet) in Length 4-6-3/Table 1, 4-6-3/11
Offshore Support Vessels (OSV Rules) 4-8-3/Table 2, 4-8-4/29.5, 4-8-3/13.1
Marine Vessel Rules:4-8-3/Table 2, 4-8-4/27.5.1, 4-8-3/13.1

Rules for Conditions of Classification, Part 1 - 2019 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Drilling Units 4-3-3/Table 1, 4-3-3/9
Mobile Offshore Units:4-3-3/Table 1, 4-3-3/9

National:

NA

International:

IEC 60079-0:2011,
IEC 60079-1: 2014,

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IEC 60079-7: 2015,
IEC 60079-31:2013

EN 60079-1:2012 / A11: 2013,
EN 60079-1: 2014,
EN 60079-7: 2015,
EN 60079-31: 2014

Government:

NA

EUMED:

NA

OTHERS:

NA