EU Type Examination Certificate CML 18ATEX3388 Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **MCU & MHC Mineral Insulated Heating Cable**

3 Manufacturer **Heat Trace Limited**

4 Address **Mere's Edge,**
Chester Road, Helsby,
Frodsham,
Cheshire,
WA6 0DJ,
United Kingdom

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-30-1:2017

10 The equipment shall be marked with the following:

II 2 G D

Ex 60079-30-1 IIC T1 to T6 Gb

Ex 60079-30-1 IIIC T450°C to T85°C Db

IP67

Minimum Installation Temperature:

MCU: -80°C

MHC: -25°C

11 Description

The MCU and MHC mineral insulated heating cables are a range of copper sheathed series resistance heating cables for long circuit length application. All cables from the range are offered as single core (one heating conductor) or dual core (two heating conductors). Single core cables are rated at 600 V and dual core cables may be rated at 300 V or 600 V.

The heating conductor are round in constructions and offered in the following materials: copper (C); copper alloy (K, K1, K2); or nickel chromium (N). A magnesium oxide insulation is utilised along with a copper sheath. The MCU cable range becomes MHC range when supplied with an HDPE outer jacket.

The cables range in diameter and length according to specification. All cables may be supplied with brazed end seals, glands, earth tags and/or cold leads according to customer specification.

MCU and MHC mineral insulated heating cables should be installed directly onto pipeline; under insulation; in accordance with the manufacturer's installation instructions (MCU:-80°C to +40°C and MHC -25°C to +40°C).

MCU cable has a withstand temperature of 250°C and MHC has a withstand temperature of 90°C. All cables will be supplied marked with a T Class (T1, T2, T3, T4, T5 or T6) and T Rating (T450°C, T300°C, T200°C, T135°C, T100°C or T85°C).

Variation 1

This variation introduced the following modifications:

i. The previous transfer of the certification from CML UK to CML B.V. has been acknowledged on this certificate.

ii. The certificate has had the standards updated to the latest editions.

iii. The applicant has updated their trademark.

iv. The conditions of manufacture have changed, to refer to the latest standards.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	14/06/2019	R524B/00	Release of Prime Certificate
1	07 Feb 2023	R16123A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. An electric strength test of 2U +500 V shall be applied between the conductors and the outer braid or jacket as appropriate for 60 seconds as required by clause 5.2.1 of EN 60079-30-1:2017.

iii. An electric strength test of the polymeric sheath (outer jacket) used for corrosion resistance shall be carried out in accordance with the requirements of EN 60079 30-1:2017 clause 5.2.1.

iv. The manufacturer shall verify the output rating for each cable manufactured in accordance with EN 60079-30-1:2017 clause 5.2.2.

v. The manufacturer shall demonstrate, through their quality programme, the thermal safety of the trace heating cable with respect to time as per EN 60079-30-1:2017 clause 5.1.12.

vi. T Class and T Rating shall be assigned with consideration to the graph shown in document Ex-MHC-0223-01. The following temperatures shall not be exceeded:

- o T1 = 440°C
- o T2 = 290°C
- o T3 = 195°C
- o T4 = 130°C
- o T5 = 95°C
- o T6 = 80°C

vii. A copy of this certificate will be provided with the equipment or available on request.

14 Specific Conditions of Use (Special Conditions)

None.

Certificate Annex

Certificate Number **CML 18ATEX3388**

Equipment **MCC & MHC Mineral Insulated Heating Cable**

Manufacturer **Heat Trace Limited**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
EX-MIHE-M-01	1 of 1	0	14/06/2019	Mark for Ex MI Heating units – product label
EX-MIHC-00	1 to 1	0	14/06/2019	The structure of MI heating cables
EX-MIHC-0223-01	1 of 1	0	14/06/2019	Maximum sheath temperature of MI heating cable for pipe outer diameter 57 mm
EX-MIHE-A2-00	1 of 1	0	14/06/2019	Type A MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-B2-00	1 of 1	0	14/06/2019	Type B MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-C2-00	1 of 1	0	14/06/2019	Type C MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-D2-00	1 of 1	0	14/06/2019	Type D MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-E2-00	1 of 1	0	14/06/2019	Type E MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-F2-00	1 of 1	0	14/06/2019	Type F MI heating units with brazing connection (MHC, MCU and MCN)
EX-MIHE-G2-00	1 of 1	0	14/06/2019	Type G MI heating units with brazing connection (MHC, MCU and MCN)
HCS-A-00	1 of 1	0	14/06/2019	Arc welding seal
EX-HCS-B-00	1 of 1	0	14/06/2019	Brazing seal
EX-HCC-A-00	1 of 1	0	14/06/2019	Arc welding connector (for type B,D,E)
EX-HCC-A-01	1 of 1	0	14/06/2019	Arc welding connector (for type A)
EX-HCC-B-00	1 of 1	0	14/06/2019	Brazing connector (for type B,D,E)
EX-HCC-B-01	1 of 1	0	14/06/2019	Brazing connector (for type A)
EX-EC-A-00	1 of 1	0	14/06/2019	Arc welding end component
EX-EC-B-00	1 of 1	0	14/06/2019	Brazing end component
EX-HCG-00	1 of 1	0	14/06/2019	Gland
MIHE-CF-00	1 of 1	0	14/06/2019	Copper compression ferrule
MIHE-EP-00	1 of 1	0	14/06/2019	Earthing plate
APDS0721	1 to 12	0	14/06/2019	Mineral insulated heating cable specifications

Certificate Annex

Certificate Number	**CML 18ATEX3388**
Equipment	**MCC & MHC Mineral Insulated Heating Cable**
Manufacturer	**Heat Trace Limited**

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
EX-MIHE-M-01	1 of 1	2	07 Feb 2023	MARK FOR EX MI HEATING UNITS-PRODUCT LABEL