



TYPE APPROVAL CERTIFICATE

No. **ELE348919CS/004**

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	LKSM-EMC-FRHF 0.6/1 kV (Cu/MGT/XLPE/LSOH/CT/CWB/LSOH 0.6/1 kV)
<i>Applicant</i>	FLEI SRL Via De Gasperi n. 82 20864 Agrate Brianza (MB) ITALY
<i>Manufacturer</i>	FLEI SRL
<i>Place of manufacture</i>	Via De Gasperi n. 82 20864 Agrate Brianza (MB) ITALY
<i>Reference standards</i>	RINA Rules for the Classification of Ships Pt C, Ch 2, Sec 9; IEC Standards (see Enclosure)

Issued in **Genoa** on **January 28, 2020**. This Certificate is valid until **January 28, 2025**

RINA Services S.p.A.
Giovanni Carratino

This certificate consists of this page and 1 enclosure





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Enclosure - Page 1 of 1
LKSM-EMC-FRHF 0.6/1 kV
(Cu/MGT/XLPE/LSOH/CT/CWB/LSOH 0.6/1 kV)

Materials/Components

Single and multicore power and control cables, fire resistant, armoured, screening, low smoke, halogen free, for ships and offshore units.

Rated voltage: 0.6/1 kV

Type: LKSM-EMC-FRHF 0.6/1 kV

Maximum conductor temperature: 90°C

Marking: FLEI - n.. X sqmm2 - Type - 0.6/1 kV - IEC 60092-353 - IEC 60331-21 - IEC 60332-1-2; IEC 60332.3.22 A - Year of manufacture - CE

Construction:

conductor: stranded plain annealed copper wires (IEC 60228 Class.2)

Mica/Glass tape on the conductor

insulation: XLPE

bedding sheath: LSOH compound

overall shield: overlapped copper tape

armour: copper wires braid

outer sheath: SHF1

In accordance with: IEC 60228; IEC 60092-350; IEC 60092-353; IEC 60092-360; IEC 60331-21:1999; IEC 60332-1-2; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; RINA Rules for Ships; RINAMIL Rules; RINA Rules for FSRU; RINAMIL for FREMM..

Technical specification:

Data Sheet FLEI N.RN_PC_007; RN_PC_008; Rev.2 dated 14/03/2018.

Test Reports:

IMQ N. CN19-0039855-01 Rev.0 dated 2019/07/30

IMQ N. CN19-0039855-02 Rev.0 dated 2019/07/30

IMQ N. CN19-0039855-03 Rev.0 dated 2019/07/30

IMQ N. CN19-0039855-04 Rev.0 dated 2019/07/30

IMQ N. CN19-0039855-05 Rev.0 dated 2019/07/30

IMQ N. CN19-0039855-06 Rev.0 dated 2019/07/30

CSI 0864/DC/REA/19-4 dated 30/07/2019

CSI 0862/DC/REA/19-5 dated 29/07/2019

CSI 0862/DC/REA/19-6 dated 29/07/2019

CSI 0864/DC/REA/19-5 dated 30/07/2019

CSI 0862/DC/REA/19-4 dated 29/07/2019

CSI 0864/DC/REA/19-6 dated 30/07/2019

CSI 0864/DC/REA/19-3 dated 30/07/2019

CSI 0862/DC/REA/19-3 dated 29/07/2019

CSI 0864/DC/REA/19-2 dated 30/07/2019

CSI 0862/DC/REA/19-2 dated 29/07/2019

CSI 0864/DC/REA/19 dated 30/07/2019

CSI 0862/DC/REA/19-1 dated 29/07/2019

Note:

Components to be used according to the instructions given by the manufacturer.

The product is subject to the compliance with RINA Rules and Standards mentioned on the certificates

Type Approval certifies that a representative sample of the products has been found to meet the applicable design criteria

Any modification of change shall not be valid until approval is granted by RINA as a result of due assessment.

Genoa January 28, 2020