



TYPE APPROVAL CERTIFICATE
No. ELE066114CS/011

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-FRHF 250V; LKSM-FRSHF2 250V.
<i>Applicant</i>	HELKAMA BICA OY LAKIMIEHENKATU 4 FIN 20780 KAARINA FINLAND
<i>Manufacturer</i>	HELKAMA BICA OY
<i>Place of manufacture</i>	LAKIMIEHENKATU 4 FIN 20780 KAARINA FINLAND
<i>Reference standards</i>	RINA Rules for the Classification of Ships, Part C, Chapter 2, Section 9; RINA Rules for Testing and Certification of Marine Materials and Equipment; IEC 60092-350; IEC 60092-376; IEC 60331.

Issued in **Genova** on **April 7, 2015**. This Certificate is valid until **April 7, 2020**

Valerio Bonanni

**RINA Services S.p.A.
Valerio Bonanni**

This certificate consists of this page and 1 enclosure



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Enclosure - Page 1 of 1

LKSM-FRHF 250V

LKSM-FRSHF2 250V.

Materials/Components

Shipboard armoured control and instrumentation cables, fire resistant, flame retardant, for fixed installations in marine and offshore units.

Rated voltage: 250 V

Type: LKSM-FRHF 250 V; LKSM-FRSHF2 250 V

Marking: cable type - n X s mm² - 250 V - +90°C - IEC 60092-376 - 60331- 60332-3-22 HELKAMA - month-year - length marking.

Construction:

conductor: stranded plain or tinned copper conductor (IEC 60228 Class2)

mica tape on the conductor

insulation: XLPE

stranding: cores stranded together. "Dummy core(s)" (fillers) may be used to keep circular form

covering: wrapped tape(s) of non-hygroscopic material

armour: plain or tinned copper wire with a drain wire

sheath: SHF1 or SHF2

Max. conductor temperature: +90°C.

In accordance to rules IEC 60228 cl.2; IEC 60092-350; IEC 60092-351; IEC 60092-376; IEC 60092-359; IEC 60092-360 as applicable; IEC 60331-1; IEC 60331-2; IEC 60332-1-2; IEC 60332-3-22; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; RINAMIL Rules.

Conductor size:

cross sectional area 0.75, 1.0, mm².

Technical specification: HBKQ 9 spec.64 dated 29/07/2010/dk.

Note/Remarks:

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.

The present Certificate cancel and supersedes the previous N. ELE438910CS/02 dated November 24, 2011.

Other Place of Manufacturing:

HELKAMA BICA (SHANGHAI) Co., Ltd

Plot 1-2, MingHang Export Processing

Zone, SHANGHAI, 201401 P.R.C.

HELKAMA BICA Oy

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Genova April 7, 2015.