

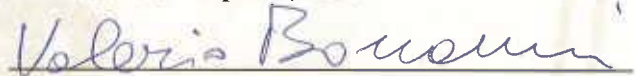


**TYPE APPROVAL CERTIFICATE**  
No. ELE066114CS/001

**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>	<b>ELECTRIC CABLES</b>
<i>Type</i>	<b>LKM-HF 0.6/1 kV; LKM-SHF2 0.6/1 kV.</b>
<i>Applicant</i>	<b>HELKAMA BICA OY LAKIMIEHENKATU 4 FIN 20780 KAARINA FINLAND</b>
<i>Manufacturer</i>	<b>HELKAMA BICA OY</b>
<i>Place of manufacture</i>	<b>LAKIMIEHENKATU 4 FIN 20780 KAARINA FINLAND</b>
<i>Reference standards</i>	<b>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 60092-353.</b>

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



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

This certificate consists of this page and 1 enclosure



**TYPE APPROVAL CERTIFICATE**

No. **ELE066114CS/001**

Enclosure - Page 1 of 1

**LKM-HF 0.6/1 kV**

**LKM-SHF2 0.6/1 kV.**

**Materials/Components**

Shipboard power cables, flame retardant, low smoke emission, halogen free.

Rated voltage: 0.6/1 kV

Type: LKM-HF 0.6/1 kV; LKM-SHF2 0.6/1 kV

Marking: "lot number" Cable Type n x s mm<sup>2</sup> 0.6/1 kV 90°C IEC 60092-353 IEC 60332-3-22 HELKAMA  
"month-year" "length marking"

**Construction:**

conductor: stranded plain or tinned copper (IEC 60228 Class 2 or Class 5)

insulation: XLPE

inner covering: separator tape wrapping

filler(s): optional

sheath: SHF1 or SHF2

In accordance to IEC 60228 cl.2 and cl.5; IEC 60092-350; IEC 60092-351; IEC 60092-353; IEC 60092-359; IEC 60092-360 as applicable; IEC 60754-1; IEC 61034-1; IEC 61034-2; IEC 60332-1; IEC 60332-3-22; RINAMIL Rules.

Maximum conductor temperature: 90°C

Number of conductors: 1 - cross sectional area 1 - 300 mm<sup>2</sup>

Number of conductors: 2 - cross-sectional area 1 - 300 mm<sup>2</sup>

Number of conductors: 3 - cross-sectional area 1 - 300 mm<sup>2</sup>

Number of conductors: 4 - cross-sectional area 1 - 300 mm<sup>2</sup>

Number of conductors: 5 - cross-sectional area 1 - 300 mm<sup>2</sup>

Number of conductors: 7,10,12,14,16,19,24,27,37 - cross sectional area 1 - 2,5 mm<sup>2</sup>.

Technical Specification: HELKAMA SPECIFICATION HBKQ 9.SPEC.3 4.7..2012/dk.

**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 cancels and supersedes the previous N. ELE196009CS/001 dated April 8, 2010.

**Other Place of Manufacturing:**

a) HELKAMA BIKA /SHANGHAI) Co., Ltd.

Plot 1-2 Minghan Expoert Processing Zone, Shanghai, 201401 P.R.C.

b) HELKAMA BICA Oy

Lasitehtaankatu 12, FI-10960 Kanko, Finland.

**Genova April 7, 2015**

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