



Marine & Offshore
Division

Certificate number: 38926/A2 BV

File number: ACE1/103/20

Product code: 2501H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to
HELKAMA BICA OY
KAARINA - FINLAND

for the type of product
CABLES (LOW VOLTAGE)
H-FLEX PWR PUR / PWR C - PUR
0.6/1kV

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60092-350/351/353/359 (2008), IEC 60228 (2004), IEC 60332-1-2 (2004), IEC 60754-1/2 (2011).

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 07 Dec 2019

For BUREAU VERITAS,

At BV HELSINKI, on 17 Feb 2016,

Tommy Andersson



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarp.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=nr7kwkiky1>

BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

The H-FLEX PWR PUR series are low voltage cables for Marine and Offshore applications.

1.1 - General data:

Rated voltage:	0.6/1kV
Flame retardant:	IEC 60332-1-2
Halogen free:	IEC 60754-1/2

1.2 - Construction:

Core:	Stranded tinned plain copper (Class 5)
Insulation:	XLPE
Armour:	Braid of plain copper wire (C-PUR only)
Sheath:	SHF1

1.3 - Approval range:

Type	Number of core	Cross-Sect. area
H-FLEX PWR C-PUR	1 to 5	1.0 to 300 mm ²
	7	1.0 to 25 mm ²
	10 to 37	1.0 to 2.5 mm ²
H-FLEX PWR PUR	1	1.0 to 300 mm ²
	2	1.0 to 70 mm ²
	3	1.0 to 240 mm ²
	4	1.0 to 150 mm ²
	5	1.0 to 50mm ²
	7	1.0 to 25 mm ²
	10 to 37	1.0 to 2.5 mm ²

2. DOCUMENTS AND DRAWINGS :

Data sheet N°HBKQ 9.SPEC.141, dated 23.Jun.2014.

Data sheet N°HBKQ 9.SPEC.140, dated 23.Jun.2014.

3. TEST REPORTS :

HELKAMA:

- Tests reports H-FLEX PUR, dated 11.Sept.2013.

4. APPLICATION / LIMITATION :

BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above cables are to be supplied by **HELKAMA BICA OY** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **HELKAMA BICA OY** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

HELKAMA BICA OY
Lakimiehenkatu 4
20780 KAARINA
FINLAND

6. MARKING OF PRODUCT :

The cable shall be marked on the surface outer sheath, in a durable legible and visible manner, with the following information through the length of cable:

- 1) - Voltage grade.
- 2) - Cable symbol and temperature class.
- 3) - Number of conductors and conductor size.
- 4) - Applicable standard(s) to flame retardant and fire resistance if any
- 5) - Manufacturer's name or trade mark.
- 6) - Year of manufacture.

7. OTHERS :

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **HELKAMA BICA OY**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 38926/A1 BV issued on 29.12.2014 by the Society.

***** END OF CERTIFICATE *****