

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Protective Systems for Cables

with type designation(s)
HENSOTHERM 6 KS

Issued to

Rudolf Hensel GmbH
Börnsen, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2017-12-31**.

Issued at **Hamburg** on **2016-12-06**

DNV GL local station: **Hamburg CMC Northern & Eastern Germany**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

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Duy Nam Le
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

"Hensotherm 6 KS"
Intumescent fire protective coating for cables.
Average thickness of coating 0.7mm-1.0mm.

Application/Limitation

Precautions against fire spreading in cable bunches:

The cable or the bunched cables to be coated on all sides. In enclosed and semi-enclosed spaces cable runs to be coated at least 1 metre in every 14 metres for horizontal runs and to entire length of vertical runs.

Fire resistant properties acc. IEC 60331-21:

The fire resistant installation is limited for cables with an overall diameter not exceeding 20 mm and of following types: NYY-J 3x2,5 / 5x1,5 N2XH-J 5x1,5 H07RN-F SG 1,5 MPRXCX 3x2,5 / 3x4 / 3x16

This approval is only valid for coating applied by Rudolf Hensel GmbH or according to Rudolf Hensels' application instructions.

Approved for use as an intumescent fire protective coating on indoor cables.

Type Approval documentation

Tests carried out

IEC 60332-3-22 (Cat. A): 2009, IEC 60331-21:1999

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE