DNV·GL

Certificate No:
TAE000041X

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Low Voltage Cable

with type designation(s)
TEHCTE

Issued to
HEW-Kabel GmbH
Wipperfürth, Nordrhein-Westfalen, 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.
Rated voltage (V) **300/500**
Temp. class (°C) **-50 up to +150 for tpc, spc, npc, +130 for conductor with cu plain**

Issued at **Hamburg** on **2020-12-07**
This Certificate is valid until **2025-12-06**.
DNV GL local station: **Essen**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

Arne Schaarmann
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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Job Id: **262.1-033872-1**
Certificate No: **TAE000041X**

Product description

HEW FEP/ETFE-Connection Cable

Type: TEHCTE

Rated voltage:	300 / 500 V
Operating temperature:	-50° C up to + 150° C for tpc, spc, npc +130° C for conductor with copper plain
Core insulation:	FEP or ETFE
Braid / screen:	Copper plain, tpc, spc, npc or stainless steel wire
Outer sheath:	ETFE or FEP

Number of cores:	Cross-sectional area
2 to 60	0,25 + 1 + 1,5 mm²
3 to 60	0,5 mm²
8 to 72	0,75 mm²
2x2 to 2x36	0,75 mm²
2 to 7	2,5 mm²
2 to 5	4 + 6 mm²
4	10 mm²

Application/Limitation

For diesel engines, turbines, auxiliary boilers devices with increased temperatures.
For measuring cables in cold storage chambers.

Measures for limitation of the propagation of fire along cable bundles are required (fire stops)

Type Approval documentation

Test Report:	Prüfplan 2, HEW Document - no. 08341v2
Data Sheet:	TD-Number 89786-001

Tests carried out

Standard	Release	General description	Limitation
MIL-W-16878/13	1994	Military cable and wires	
VDE 0207-6	2004-10	Insulating and sheating compounds for cables and flexible cords	
VG 95218-64	2016-12	Cables and insulated wires - Part 64: Cable with single and double screen, with sheath, pair and triple formation, not screened, halogenfree, low fire hazard, detail standard	
VG 95218-27	2008-06	Cables and insulated wires – Part 27: Cable with sheath, cross-reference list for standardization of types	
IEC 60228	2004-11	Conductors of insulated cables	
IEC 60332-1-2 AMD1	2004-07 2015-07	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame	

Marking of product

HEW-KABEL - DNV GL No. TAE000041X – TEHCTE - size – 300/500V – special text

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