

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Low Voltage Cable**

with type designation(s)  
**YTE- n.p.c. and YTEGL- n.p.c.**

Issued to

**Koch Kabel AG**  
**Dagmersellen, LU, Switzerland**

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) 600**  
**Temp. class (°C) 260**

Issued at **Hamburg** on **2018-06-26**

This Certificate is valid until **2023-06-25**.

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Carsten Hunsalz**

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**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.



## Product description

PTFE single-core cable for cryogenics applications

Type: YTE- n.p.c. and YTEGL- n.p.c.

Rated voltage: 600 V  
Operating temperature: -196°C up to 260°C (20000h)  
Conductor: copper nickel plated  
Insulation: PTFE  
Braid: Glass-fibre + Impregnation for YTEGL cable type

Number of cores: Cross-sectional area:  
1 0,5 mm<sup>2</sup> to 50 mm<sup>2</sup>

## Application/Limitation

Cable for cryogenics applications

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

## Type Approval documentation

### Tests carried out

| Standard            | Release | General description                                                                                                                                                                       | Limitation |
|---------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| ANSI/NEMA HP 3-2012 | 2012    | Electrical and Electronic Polytetrafluoroethylene (PTFE) Insulated High-Temperature Hook-Up Wire, Types ET (250 V), E (600 V), and EE (1,000 V)                                           |            |
| IEC 60228           | 2004-11 | Conductors of insulated cables                                                                                                                                                            |            |
| VDE 0207-6          | 2004-10 | Insulating and sheathing compounds for cables and flexible cords                                                                                                                          |            |
| IEC 60332-1-2       | 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 |            |
| VG 95218-28         | 2008-12 | Electrical cables and insulated wires - Part 28: Cable screened, with sheath; detail specification                                                                                        | partly     |
| VG 95218-29         | 2016-11 | Cables and insulated wires – Part 29: Cables, longitudinal watertight, transversal watertight                                                                                             | partly     |
| ISO 16750-5         | 2010-04 | Road vehicles - Environmental conditions and testing for electrical and electronic equipment – Part 5: Chemical loads                                                                     | partly     |

Job Id: **262.1-027545-1**  
Certificate No: **TAE00002T4**

## Marking of product

Example:

Koch Kabel AG - DNV GL No. TAE00002T4 - YTE - n.p.c. - size - 600 V - Art.nr. XXXXX - week/year - CE  
- www.kochkabel.ch - RoHS - meter marking

## Place of Production

DNV GL id: 10376706

## 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