



Marine & Offshore

Certificate number: 09555/D0 BV

File number: ACE 01/723/01

Product code: 2502H

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

NEXANS Suisse SA

Cortailod - SWITZERLAND

for the type of product

CABLES (MEDIUM/HIGH VOLTAGE)

Types: SIWO-KUL B10, B20, D30, S10 and S30

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

IEC 60228 (2004)

IEC 60331-1 (2009), IEC 60331-21 (1999)

IEC 60332-1-2 (2015), IEC 60332-3-22/24 (2008)

IEC 60754-1/2 (2011)

IEC 61034-1/2 (2013)

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 22 Feb 2027

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 22 Feb 2022,

Dirk Hoepfner



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 Marine & Offshore. 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 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 Marine & Offshore 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=kz96eqgk12>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

SIWO-KUL cables are Low, Medium and High Voltage cables for High Temperature Internal Wiring or Connections of Marine Equipments.

1.1 - Common specifications:

Construction / Design:	According to: UL758 (partly) Styles 3640, 3641, 3642, 3643 and IEC 60092-350 (partly)
Temperature range:	-55°C to +180°C
Flame retardant:	IEC 60332-1-2 IEC 60332-3-22 (cross-sections ≤35 mm ²) IEC 60332-3-24 (cross-sections >35 mm ²)
Fire Resistant:	IEC 60331-21 (90+15 mn), IEC 60331-1 (120 mn)
Halogen Free:	IEC 60754-1/2
Low Smoke:	IEC 61034-1/2
Fluorine Content:	IEC 60684-2
Toxicity:	EN 50305

1.2 - Construction:

Conductor:	Stranded tinned copper - Class 5
Insulation:	Silicone rubber (SIR)
Screen:	Tinned copper wires braiding (S10 and S30 types)
Outer Sheath:	Synthetic yarn braiding (B10, B20 and S10 types) Silicone rubber (SIR) (D30 and S30 types)

1.3 - Product Range:

Type	Number of core	Cross-Section area (mm ²)	Rated Voltage (kV)	Remark
SIWO-KULB10	1C	1.5 to 300	1.1 & 3.3/4.2	No metal screen
SIWO-KULB20		2.5 to 300	6.6/7.2	No metal screen
SIWO-KULD30		6 to 300	13.8/15.0	No metal screen
SIWO-KULS10	1C	1.5 to 300	1.1 & 3.3/4.2	CuSn braided screen
SIWO-KULS30		4 to 300	6.6/7.2	CuSn braided screen
		16 to 300	12/13.8	CuSn braided screen

2. DOCUMENTS AND DRAWINGS :

Type	1.1kV	3.3/4.2kV	6.6/7.2kV	12/13.8/15kV
SIWO-KULB10	A37.50.075 dated 04 Feb 2020	A37.50.075 dated 04 Feb 2020	A37.50.076 dated 04 Feb 2020	A37.50.076 dated 04 Feb 2020
SIWO-KULB20	37.50.435 dated 02 Apr 2020	37.50.435 dated 02 Apr 2020	37.50.436 dated 02 Apr 2020	37.50.436 dated 02 Apr 2020
SIWO-KULD30	A37.50.565 dated 06 Apr 2020	A37.50.565 dated 06 Apr 2020	A37.50.569 dated 06 Apr 2020	A37.50.569 dated 06 Apr 2020
SIWO-KULS10	37.50.421 dated 12 Mar 2020	37.50.421 dated 12 Mar 2020	DB37.50.363 dated 23 Mar 2020	37.50.558 dated 23 Mar 2020
SIWO-KULS30	37.50.421 dated 12 Mar 2020	37.50.421 dated 12 Mar 2020	37.50.363 dated 23 Mar 2020	37.50.558 dated 23 Mar 2020

3. TEST REPORTS :

Tests carried out by Alcatel Kabel in house laboratory on 15 & 16/Nov/1999 and witnessed by the Society.

Nexans Schweiz AG:

Type Test Reports Nr. Q6604.003 dated (2 pages) and Q6604.001 (1 page), undated

Test Reports No. Q-24PI-05-W-5114/5115/5116 all dated 31.01.2011.

Nexans Switzerland LTD:

Test Certificate No. Q-24PI-05-Z- 103686438 dated 03.12.2009

Test Certificates No. Q-24PI-05-Z- 104162716 and No. Q-24PI-05-Z-104183839 both dated 11.01.2011

Test Certificate No. Q-24PI-05-Z- 104156107 dated 19.01.2011.

Test Certificate No. Q-31103CH-Z- 100829205, dated 28.06.2018

Test Certificate No. Q-31103CH-Z- 100911351, dated 24.07.2018

Test Certificate No. Q-31103CH-Z- 200015926, dated 11.07.2018

Test Certificate No. Q-31103CH-Z- 200020977, dated 17.07.2018

Test Certificate No. Q-31103CH-Z- 200016174, dated 07.08.2018

Test Certificate No. Q-31103CH-Z- 200009541, dated 31.08.2018

Test Certificate No. Q-31103CH-Z- 101186383, dated 120.11.2019

Test Certificate No. Q-31103CH-Z- 101399006, dated 16.09.2020

Test Certificate No. Q-31103CH-Z- 101492147, dated 16.09.2020

Test Certificate No. Q-31103CH-Z- 101477649, dated 25.02.2021

Test Certificate No. Q-31103CH-Z- 101491781 and Q-31103CH-Z- 101493606, dated 15.03.2021

Test Certificate No. Q-31103CH-Z- 101479245 and Q-31103CH-Z- 101511476, dated 18.03.2021

Nexans Research Center Nürnberg:

Test report N° NX_ROS-19-017, dated May 2019.

Summary of the Fire Performance Tests: SIWO-KUL/SIWO-SCREEN HV-cables (Silicone), dated August 2011.

(Test Reports according to IEC 60332-1, IEC 60332-3-24, IEC 60331-1/21, IEC 61034-1/2, EN 50362, EN 50266-2-2, EN 50305-9.2, EN 50306-1, EN 50267-2-2, EN 60684-2)

Test for Vertical Flame Spread, Project Nr. P-00465 (IEC 60332-3-22, DIN EN 50266-2-2), dated 09.02.2012.

4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - For use as coil leads in generators, motors, engines and any other high temperature low, medium and high voltage connections of marine equipments.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **NEXANS Suisse SA** 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 and as such does not require a BV product certificate.

5.3 - **NEXANS Suisse SA** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **NEXANS Suisse SA** has declared to Bureau Veritas the following production site:

NEXANS Suisse SA
Av. Francois Borel, 17
2016 Cortaillod
SWITZERLAND

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

7. OTHERS :

7.1 - It is **NEXANS Suisse SA**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate n° 09555/C0 BV issued on 02 Mar 2012 by the Society.

*** END OF CERTIFICATE ***