

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Electric Power Cable**with type designation(s)  
**RFOU P1 & P1/P8 0,6/1 kV**

Issued to

**Jiangsu Yuanyang Cable Co.,Ltd**  
**YANGZHOU JIANGSU, China**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.****Voltage class (kV) 0,6/1**  
**Temp. class (°C) 90**This Certificate is valid until **2021-06-29**.Issued at **Hamburg** on **2016-09-13**DNV GL local station: **Nanjing**Approval Engineer: **Carsten Hunsalz**for **DNV GL**-----  
**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

Type: RFOU P1 & P1/P8 0,6/1 kV

Construction:  
 Conductors: Tinned stranded copper class 2  
 Core insulation: EPR  
 Inner covering: Halogen free compound  
 Metal covering: Tinned copper wire braid  
 Outer sheath: SHF2 or SHF Mud

Number of cores x conductor cross- section mm <sup>2</sup>	Overall Diameter nominal mm	Overall Diameter max mm
1 x 1,0	8,4	9,8
1 x 1,5	9,3	10,5
1 x 2,5	9,7	11,0
1 x 4	10,3	11,5
1 x 6	10,9	12,0
1 x 10	12,0	13,5
1 x 16	13,0	14,5
1 x 25	15,5	17,0
1 x 35	16,8	18,5
1 x 50	18,6	20,5
1 x 70	20,4	22,0
1 x 95	22,9	25,0
1 x 120	24,7	27,5
1 x 150	26,9	29,0
1 x 185	29,1	31,5
1 x 240	32,4	34,5
1 x 300	35,8	38,5
2 x 1,0	12,3	13,5
2 x 1,5	13,1	14,5
2 x 2,5	13,9	15,5
2 x 4	15,8	17,5
2 x 6	17,0	18,5
2 x 10	19,0	20,5
2 x 16	21,3	23,0
2 x 25	25,0	27,0
2 x 35	27,7	30,0
2 x 50	31,0	33,5
2 x 70	35,9	38,5
2 x 95	40,8	43,5
2 x 120	44,2	47,0

Number of cores x conductor cross- section mm <sup>2</sup>	Overall Diameter nominal mm	Overall Diameter max mm
3 x 1,0	13,2	14,0
3 x 1,5	14,1	15,0
3 x 2,5	15,3	17,0
3 x 4	16,4	18,0
3 x 6	18,0	19,5
3 x 10	20,1	21,5
3 x 16	22,4	24,0
3 x 25	26,3	28,5
3 x 35	29,2	31,5
3 x 50	33,2	35,5
3 x 70	37,8	40,5
3 x 95	43,5	46,5
3 x 120	47,2	50,5
3 x 150	52,4	55,5
3 x 185	57,5	61,0
4 x 1,0	14,9	16,0
4 x 1,5	15,4	17,0
4 x 2,5	16,0	18,0
4 x 4	18,0	19,5
4 x 6	19,3	21,0
4 x 10	22,0	23,5
4 x 16	24,5	26,5
4 x 25	29,0	31,0
4 x 35	32,3	34,5
4 x 50	37,0	39,5
4 x 70	42,1	45,0
4 x 95	48,2	51,0
4 x 120	52,5	56,0
4 x 150	57,6	61,5



Job Id: **262.1-004811-3**  
Certificate No: **TAE00001DE**

IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60332-3-22	2009-02	Tests on electric and optical fibre cables under fire conditions – Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A	Bunch test Category A
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2013-07 2013-09	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%
NEK TS 606	2016	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test: IRM903 100°C 7d. Calcium Bromide 70°C 56d. Carbo Sea 70°C 56d.

## Marking of product

Jiangsu Yuanyang Cable Co.,Ltd - RFOU P1 or P1/P8 - size - 0,6/1 kV – IEC 60332-3-22 Cat A  
NEK TS606 - date

## 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.

Assessment to be performed at least every second year.

END OF CERTIFICATE

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Electric Power Cable**with type designation(s)  
**BFOU P5 & P5/P12 0,6/1 kV**

Issued to

**Jiangsu Yuanyang Cable Co.,Ltd**  
**YANGZHOU JIANGSU, China**

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.****Voltage class (kV) 0,6/1**  
**Temp. class (°C) 90**This Certificate is valid until **2021-06-29**.Issued at **Hamburg** on **2016-09-14**DNV GL local station: **Nanjing**Approval Engineer: **Carsten Hunsalz**for **DNV GL**-----  
**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

Type: BFOU P5 & P5/P12 0,6/1 kV

Construction:  
 Conductors: Tinned stranded copper class 2  
 Core insulation: Mica tape + EPR  
 Inner covering: Halogen free compound  
 Metal covering: Tinned copper wire braid  
 Outer sheath: SHF2 or SHF Mud

Number of cores x conductor cross- section mm <sup>2</sup>	Overall Diameter nominal mm	Overall Diameter max mm
1 x 1,0	9,6	10,5
1 x 1,5	10,2	11,5
1 x 2,5	10,6	12,0
1 x 4	11,2	12,5
1 x 6	11,8	13,0
1 x 10	12,8	13,5
1 x 16	13,6	15,5
1 x 25	15,8	17,5
1 x 35	17,2	19,0
1 x 50	19,8	21,0
1 x 70	21,5	23,5
1 x 95	22,8	26,0
1 x 120	25,4	27,5
1 x 150	27,7	30,0
1 x 185	30,2	33,0
1 x 240	33,6	36,5
1 x 300	37,1	40,0
2 x 1,0	14,4	16,0
2 x 1,5	14,9	16,5
2 x 2,5	16,1	18,0
2 x 4	17,3	19,5
2 x 6	18,5	20,5
2 x 10	20,5	22,5
2 x 16	23,1	25,0
2 x 25	26,5	28,5
2 x 35	29,5	31,5
2 x 50	33,0	35,5
2 x 70	37,6	40,5
2 x 95	42,9	46,0
2 x 120	46,0	49,0

Number of cores x conductor cross- section mm <sup>2</sup>	Overall Diameter nominal mm	Overall Diameter max mm
3 x 1,0	15,1	16,5
3 x 1,5	15,9	17,5
3 x 2,5	16,9	18,5
3 x 4	18,1	19,5
3 x 6	19,7	21,5
3 x 10	21,7	24,0
3 x 16	24,3	26,5
3 x 25	28,3	30,5
3 x 35	31,3	33,5
3 x 50	35,4	38,0
3 x 70	40,3	43,5
3 x 95	46,0	49,0
3 x 120	49,7	53,0
3 x 150	54,5	57,5
3 x 185	59,5	63,0
4 x 1,0	16,4	17,5
4 x 1,5	17,0	18,0
4 x 2,5	18,4	19,5
4 x 4	20,0	21,5
4 x 6	21,5	23,0
4 x 10	23,8	25,5
4 x 16	26,3	28,5
4 x 25	30,8	33,0
4 x 35	34,7	36,5
4 x 50	40,2	43,0
4 x 70	44,2	47,0
4 x 95	50,3	53,5
4 x 120	54,5	58,0
4 x 150	60,1	63,5



## Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2014-08	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-353	2011-08	Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV	0,6/1 kV
IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60331-1	2009-05	Tests for electric cables under fire conditions - Circuit integrity - Part 1: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter exceeding 20 mm	
IEC 60331-21	1999-04	Tests for electric cables under fire conditions – Circuit integrity – Part 21: Procedures and requirements – Cables of rated voltage up to and including 0,6/1,0 kV	Minimum 90 min. flame application + 15 min. cooling period.
IEC 60332-3-22	2009-02	Tests on electric and optical fibre cables under fire conditions – Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A	Bunch test Category A
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2013-07 2013-09	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%
NEK TS 606	2016	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test: IRM903 100°C 7d. Calcium Bromide 70°C 56d. Carbo Sea 70°C 56d.



Job Id: **262.1-004811-3**  
Certificate No: **TAE00001DF**

## Marking of product

Jiangsu Yuanyang Cable Co.,Ltd - BFOU P5 or P5/P12 - size - 0,6/1 kV – IEC 60331-1 IEC 60331-21  
IEC 60332-3-22 Cat A NEK TS606 - date

## 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.

Assessment to be performed at least every second year.

END OF CERTIFICATE

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Low Voltage Cable**

with type designation(s)

**RFOU (i) S1 & S1/S5 & (c) S2 & S2/S6 250 V**

Issued to

**Jiangsu Yuanyang Cable Co.,Ltd  
YANGZHOU JIANGSU, China**

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.****Voltage class (V) 250****Temp. class (°C) 90**This Certificate is valid until **2021-06-29**.Issued at **Hamburg** on **2016-09-14**DNV GL local station: **Nanjing**Approval Engineer: **Carsten Hunsalz**for **DNV GL**-----  
**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

Type: RFOU (i) S1 or S1/S5 & (c) S2 or S2/S6 250 V

Construction:

Conductors: Tinned stranded copper class 2

Core insulation: EPR

Screen: Cu/PET tape w/tinned copper drain wire

Inner covering: Halogen free compound

Metal covering: Tinned copper wire braid

Outer sheath: SHF2 or SHF Mud

Number of cores x conductor cross-section	Overall Diameter nominal (i)	Overall Diameter max (i)	Overall Diameter nominal (c)	Overall Diameter max (c)
mm <sup>2</sup>	mm	mm	mm	mm
1 x 2 x 0,75	10,3	11,5	10,3	11,5
2 x 2 x 0,75	14,2	15,5	14,3	15,0
3 x 2 x 0,75	15,7	17,0	14,9	17,0
4 x 2 x 0,75	16,6	18,0	16,1	17,5
7 x 2 x 0,75	19,3	21,0	18,5	20,0
8 x 2 x 0,75	21,2	23,0	20,2	22,0
12 x 2 x 0,75	24,4	26,5	23,3	25,5
16 x 2 x 0,75	27,0	29,0	25,5	27,5
19 x 2 x 0,75	28,5	30,5	26,6	28,5
24 x 2 x 0,75	33,3	36,0	31,2	33,5
1 x 2 x 1,0	11,6	12,5	11,6	12,5
2 x 2 x 1,0	16,0	17,5	15,7	17,0
3 x 2 x 1,0	16,6	18,0	16,4	18,0
4 x 2 x 1,0	18,0	19,5	17,5	19,0
7 x 2 x 1,0	20,6	22,0	20,3	21,5
8 x 2 x 1,0	22,5	24,5	21,7	23,5
12 x 2 x 1,0	25,5	27,5	24,8	27,0
16 x 2 x 1,0	29,0	31,0	28,3	30,0
19 x 2 x 1,0	31,2	33,5	30,0	32,5
24 x 2 x 1,0	35,3	38,0	34,2	37,0
1 x 2 x 1,5	11,9	13,5	11,9	13,5
2 x 2 x 1,5	17,5	19,0	16,6	18,0
3 x 2 x 1,5	18,4	19,5	17,4	19,0
4 x 2 x 1,5	20,0	21,5	18,8	20,5
7 x 2 x 1,5	23,2	25,0	21,9	24,0
8 x 2 x 1,5	25,8	28,0	24,2	26,5
12 x 2 x 1,5	30,0	32,0	27,9	30,0
16 x 2 x 1,5	33,2	36,0	31,3	34,0
19 x 2 x 1,5	35,4	38,5	32,8	35,5
24 x 2 x 1,5	42,5	46,0	38,7	41,5

Number of cores x conductor cross-section	Overall Diameter nominal (i)	Overall Diameter max (i)	Overall Diameter nominal (c)	Overall Diameter max (c)
mm <sup>2</sup>	mm	mm	mm	mm
1 x 2 x 2,5	12,6	14,0	12,6	14,0
2 x 2 x 2,5	19,2	21,0	18,2	18,5
3 x 2 x 2,5	20,1	25,1	19,3	21,0
4 x 2 x 2,5	22,0	24,0	20,8	22,5
7 x 2 x 2,5	25,6	28,0	24,5	26,0
8 x 2 x 2,5	28,5	31,0	27,2	29,0
12 x 2 x 2,5	33,7	36,0	31,4	34,0
16 x 2 x 2,5	37,8	41,0	35,8	37,5
19 x 2 x 2,5	40,0	43,5	37,7	40,0
24 x 2 x 2,5	46,5	49,5	44,1	46,5

### Application/Limitation

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

Control and instrumentation. Halogen free. Low smoke. Mud resistant. Flame retardant in bunch Cat A.

### Type Approval documentation

### Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2014-08	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-376	2003-05	Cables for control and instrumentation circuits 150/250 V (300 V)	
IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60332-3-22	2009-02	Tests on electric and optical fibre cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A	Bunch test Category A
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm

Job Id: **262.1-004811-3**  
Certificate No: **TAE00001DH**

IEC 61034-1/2	2013-07 2013-09	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%
NEK TS 606	2016	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test: IRM903 100°C 7d. Calcium Bromide 70°C 56d. Carbo Sea 70°C 56d.

### Marking of product

Jiangsu Yuanyang Cable Co., Ltd - RFOU (i) S1 or S1/S5 or (c) S2 or S2/S6 - size – IEC 60332-3 Cat A  
NEK TS606 - 250 V – date

### 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.

Assessment to be performed at least every second year.

END OF CERTIFICATE

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Low Voltage Cable**

with type designation(s)

**BFOU (i) S3 & S3/S7 & BFOU (c) S4 & S4/S8 250 V**

Issued to

**Jiangsu Yuanyang Cable Co.,Ltd**  
**YANGZHOU JIANGSU, China**

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.****Voltage class (V) 250****Temp. class (°C) 90**This Certificate is valid until **2021-06-29**.Issued at **Hamburg** on **2016-09-14**DNV GL local station: **Nanjing**Approval Engineer: **Carsten Hunsalz**for **DNV GL**-----  
**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

Type: BFOU (i) S3 or S3/S7 250 V  
 BFOU (c) S4 or S4/S8 250 V

Construction:  
 Conductors: Tinned stranded copper class 2  
 Core insulation: Mica tape + EPR  
 Screen: Cu/PET tape w/tinned copper drain wire  
 Inner covering: Halogen free compound  
 Metal covering: Tinned copper wire braid  
 Outer sheath: SHF2 or SHF Mud

Number of cores x conductor cross-section	Overall Diameter nominal (i)	Overall Diameter max (i)	Overall Diameter nominal (c)	Overall Diameter max (c)
mm <sup>2</sup>	mm	mm	mm	mm
1 x 2 x 0,75	12,0	13,5	12,0	13,5
2 x 2 x 0,75	17,2	18,5	15,9	17,5
3 x 2 x 0,75	18,8	20,5	16,8	18,5
4 x 2 x 0,75	19,4	21,0	18,2	20,0
7 x 2 x 0,75	23,5	25,0	21,5	23,5
8 x 2 x 0,75	26,3	28,5	24,6	26,5
12 x 2 x 0,75	30,8	33,0	28,5	30,5
16 x 2 x 0,75	34,0	36,5	31,5	34,0
19 x 2 x 0,75	35,8	38,5	33,8	37,0
24 x 2 x 0,75	42,2	45,0	39,4	42,5
1 x 2 x 1,0	12,5	14,0	12,5	14,0
2 x 2 x 1,0	17,9	19,5	17,4	19,0
3 x 2 x 1,0	19,8	21,5	18,1	19,5
4 x 2 x 1,0	20,5	22,0	19,2	20,5
7 x 2 x 1,0	24,6	26,0	22,4	24,0
8 x 2 x 1,0	27,0	29,0	25,6	27,0
12 x 2 x 1,0	31,9	34,0	29,5	31,5
16 x 2 x 1,0	35,5	37,5	32,7	34,5
19 x 2 x 1,0	37,0	40,0	35,3	37,5
24 x 2 x 1,0	44,4	47,5	42,8	45,0
1 x 2 x 1,5	13,3	15,0	13,3	15,0
2 x 2 x 1,5	19,9	22,0	18,7	20,5
3 x 2 x 1,5	21,1	23,0	19,8	21,5
4 x 2 x 1,5	23,0	25,0	21,6	23,5
7 x 2 x 1,5	28,0	30,0	25,7	27,5
8 x 2 x 1,5	30,7	33,0	28,2	30,1
12 x 2 x 1,5	36,4	39,0	33,9	36,5
16 x 2 x 1,5	40,7	43,5	36,7	39,0
19 x 2 x 1,5	42,9	46,0	40,2	42,5
24 x 2 x 1,5	49,2	52,0	45,3	49,0

Number of cores x conductor cross-section	Overall Diameter nominal (i)	Overall Diameter max (i)	Overall Diameter nominal (c)	Overall Diameter max (c)
mm <sup>2</sup>	mm	mm	mm	mm
1 x 2 x 2,5	14,1	15,5	14,1	15,5
2 x 2 x 2,5	21,4	23,0	20,1	22,0
3 x 2 x 2,5	22,7	24,5	21,3	23,0
4 x 2 x 2,5	25,5	27,5	23,3	25,0
7 x 2 x 2,5	30,9	33,0	28,4	30,5
8 x 2 x 2,5	33,8	36,0	31,6	34,0
12 x 2 x 2,5	40,1	43,0	36,7	39,5
16 x 2 x 2,5	44,8	48,0	41,9	45,0
19 x 2 x 2,5	47,2	50,5	44,0	47,0
24 x 2 x 2,5	55,2	59,0	51,1	54,0

### Application/Limitation

This type of cable is fire resistant in accordance with IEC Publication 60331.

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

Control and instrumentation. Fire resistant. Halogen free. Low smoke. Mud resistant. Flame retardant in bunch Cat A.

### Type Approval documentation

### Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2014-08	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-376	2003-05	Cables for control and instrumentation circuits 150/250 V (300 V)	
IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	



Job Id: **262.1-004811-3**  
Certificate No: **TAE00001DJ**

IEC 60331-1	2009-05	Tests for electric cables under fire conditions - Circuit integrity - Part 1: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter exceeding 20 mm	
IEC 60331-21	1999-04	Tests for electric cables under fire conditions - Circuit integrity - Part 21: Procedures and requirements - Cables of rated voltage up to and including 0,6/1,0 kV	Minimum 90 min. flame application + 15 min. cooling period.
IEC 60332-3-22	2009-02	Tests on electric and optical fibre cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A	Bunch test Category A
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2013-07 2013-09	Measurement of smoke density of cables burning under defined conditions - Test apparatus, procedure and requirements	Low smoke Light transmittance >60%
NEK TS 606	2016	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test: IRM903 100°C 7d. Calcium Bromide 70°C 56d. Carbo Sea 70°C 56d.

## Marking of product

Jiangsu Yuanyang Cable Co., Ltd - BFOU (i) S3 or S3/S7 or (c) S4 or S4/S8 - size - 250 V - IEC 60331-1 IEC 60331-21 IEC 60332-3-22 Cat A NEK TS606 - date

## 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.

Assessment to be performed at least every second year.

END OF CERTIFICATE