Certificate no.:
TAE0000537

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Power Cable

with type designation(s)
CEPJ85/SC, CEPJ95/SC, CEPF86/SC, CEPF96/SC

issued to
Guangzhou OUSSEA Photoelectric Transmission Technology Inc., Ltd.
Guangzhou, Guangdong Province, China

is found to comply with

DNV 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.

Rated voltage (kV)	**0,6/1**
Temp. class (°C)	**90**

Issued at **Hamburg** on **2025-10-09**
This Certificate is valid until **2030-10-08**.
DNV local unit: **China South NB**

for **DNV**

Approval Engineer: **Carsten Hunsalz**

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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 USD 300 000.

Job ID: **262.1-042245-1**
Certificate no.: **TAE0000537**

Product description

Type: CEPJ85/SC, CEPJ95/SC, CEPF86/SC, CEPF96/SC

Conductor: Tinned, stranded copper class 2 or class 5
Insulation: EPR
Inner sheath: PF - (SHF1) or PJ - (SHF2)
Armour / braid: 8 - Tinned copper wire braid
9 - Galvanized steel wire braid (not for single core cables when not non-magnetic)
Outer sheath: 5 - (SHF2) or 6 - (SHF1)

CEPJ85/SC, CEPJ95/SC, CEPF86/SC, CEPF96/SC 0,6/1kV

Number of cores x conductor cross-section	Overall diameter nom.	Number of cores x conductor cross-section	Overall diameter nom.	Number of cores x conductor cross-section	Overall diameter nom.	Number of cores x conductor cross-section	Overall diameter nom.
mm^2	mm	mm^2	mm	mm^2	mm	mm^2	mm
1x1	8,2	3(2+E)x25	26,3	6x1	15,2	6x4	19,2
1x1,5	8,4	3(2+E)x35	29,4	7x1	15,9	7x4	20,2
1x2,5	8,9	3(2+E)x50	33,4	10x1	19,7	10x4	25,4
1x4	9,4	3(2+E)x70	38,3	12x1	20,3	12x4	26,2
1x6	10,0	3(2+E)x95	44,0	14x1	21,2	14x4	27,5
1x10	11,1	3(2+E)x120	47,9	16x1	22,3	16x4	29,0
1x16	12,3	3(2+E)x150	52,7	19x1	23,4	19x4	30,5
1x25	14,7	3(2+E)x185	58,3	24x1	27,1	24x4	36,2
1x35	16,1	3(2+E)x240	65,6	27x1	27,7	27x4	37,0
1x50	18,0			30x1	28,7	30x4	38,3
1x70	20,1	4(3+E)x1	13,8	33x1	29,7	33x4	39,8
1x95	22,7	4(3+E)x1,5	14,5	37x1	30,9	37x4	41,4
1x120	24,5	4(3+E)x2,5	15,8				
1x150	26,7	4(3+E)x4	17,2	6x1,5	16,0		
1x185	29,3	4(3+E)x6	18,8	7x1,5	16,9		
1x240	32,7	4(3+E)x10	21,3	10x1,5	20,9		
1x300	36,4	4(3+E)x16	24,2	12x1,5	21,5		
		4(3+E)x25	28,9	14x1,5	22,5		
2x1	11,7	4(3+E)x35	32,3	16x1,5	23,7		
2x1,5	12,3	4(3+E)x50	37,4	19x1,5	24,9		
2x2,5	13,9	4(3+E)x70	42,3	24x1,5	29,0		
2x4	15,1	4(3+E)x95	48,6	27x1,5	29,6		
2x6	16,4	4(3+E)x120	53,0	30x1,5	30,6		
2x10	18,5	4(3+E)x150	58,4	33x1,5	31,8		
2x16	20,8	4(3+E)x185	64,7	37x1,5	33,0		
2x25	24,7						
2x35	27,5	5(4+E)x1	14,8	6x2,5	17,6		
2x50	31,3	5(4+E)x1,5	15,6	7x2,5	18,5		
2x70	35,9	5(4+E)x2,5	17,1	10x2,5	23,1		
2x95	41,1	5(4+E)x4	18,7	12x2,5	23,8		
2x120	44,8	5(4+E)x6	20,4	14x2,5	24,9		
2x150	49,2	5(4+E)x10	23,3	16x2,5	26,3		
2x185	54,3	5(4+E)x16	26,5	19x2,5	27,6		
		5(4+E)x25	31,7	24x2,5	32,2		
3(2+E)x1	12,3	5(4+E)x35	36,0	27x2,5	32,9		
3(2+E)x1,5	13,5	5(4+E)x50	41,1	30x2,5	34,1		
3(2+E)x2,5	14,6	5(4+E)x70	46,6	33x2,5	36,0		
3(2+E)x4	15,9	5(4+E)x95	53,6	37x2,5	37,3		
3(2+E)x6	17,3	5(4+E)x120	58,6				
3(2+E)x10	19,6	5(4+E)x150	64,5				
3(2+E)x16	22,1	5(4+E)x185	71,5				

Application/Limitation

General power and lighting. Control.

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.

Flame retardant Cat. A. Halogen free. Low smoke.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
DNV-CP-0399	2021-08	Class Programme Electric cables	
IEC 60092-350	2020-01	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-353	2024-06	Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV	
IEC 60092-360	2021-01	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60332-1-2	2015-07	Tests on eletric cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable.	
IEC 60332-3-22	2018-07	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	Charred portion of sample does not exceed 2,5m above bottom edge of burner.
IEC 60754-1	2019-11	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	2019-11	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 60684-2	2011-08	Clause 45.2 Methods of determination of low levels of fluorine	HF max 0,1%
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Marking of product

Example:

Guangzhou OUSSEA Photoelectric Transmission Technology Inc., Ltd. - CEPJ85/SC – 0,6/1kV - size -
IEC 60332-3-22 – Lot no.

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