Certificate no.:
TAE0000549

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Power Cable

with type designation(s)
EZearth-0.6/1kV -PCI, PCY

issued to
Kukdong Electric Wire Co., Ltd.
Jincheon-gun, Chungcheongbuk-do, **Korea, Republic of**

is found to comply with
DNV rules for classification – Ships

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 **Busan** on **2025-10-30**

This Certificate is valid until **2030-10-29**.

for **DNV**

DNV local unit: **Seoul**

Approval Engineer: **Eun Jin Lee**

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.

Product description

EZearth-0.6/1kV PCY 2 core x 2.5sqmm

Conductors:	Tinned annealed stranded copper conductor, Class 2
Core insulation	HEPR
Inner covering :	ST2
Metal covering :	Combined braid with galvanized steel wire and tinned copper wire(or plain copper wire)
Outer sheath :	ST2

EZearth-0.6/1kV PCI 2 core x 2.5sqmm

Conductors:	Tinned annealed stranded copper conductor, Class 2
Core insulation :	HEPR
Inner covering :	HF-Flexible compound
Metal covering :	Combined braid with galvanized steel wire and tinned copper wire(or plain copper wire)
Outer sheath :	SHF1

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.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
IEC 60092-353	2016	Power cables for rated voltages 1kV and 3kV	
IEC 60092-360	2021	Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation, telecommunication cables	
IEC 60332-1	2015	Test for vertical flame propagation for a single insulated wire or cable	
IEC 60332-3-22	2018	Test for vertical flame spread of vertically mounted bunched wires or cables	Cat. A
IEC 60811-505	2012	Elongation tests at low temperature for insulations and sheaths	@-30 ˚C (for PCY)
IEC 60811-506	2012	Impact test at low temperature for insulations and sheaths	@-30 ˚C (for PCY)
IEEE1580	2021	Recommended practice for Marine cable for Use on shipboard and fixed or floating facilities	Oil resistant 70˚C /4 hrs (for PCY)
IEC 60684-2	2011	Flexible insulating sleeving – Part 2: Methods of test.	Fluorine content <0,1% (for PCI)
IEC 60754-1	2019	Test on gases evolved during combustion of materials from cables – Determination of the amount of halogen acid gas	Low Halogen <0,5% (for PCI)
IEC 60754-2	2019	Test on gases evolved during combustion of materials from cables – Determination of the degree of acidity of gases evolved during the combustion of materials taken from electric cables by measuring pH and conductivity	Halogen free ≥4,3pH, ≤10µS/mm (for PCI)
IEC 61034-1/2	2019	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke >60% (for PCI)
CSA C22.2 No. 03	2019	5.11 Flexibility at any specified temperature	Cold bend: -40°C (for PCI)
CSA C22.2 No. 03	2019	5.12 Abnormal low temperature – impact	Cold impact: -35°C (for PCI)

Marking of product

EZearth 0.6/1kV PCY 2Cx2.5/2.5 sqmm KUKDONG IEC 60332-3A – Year of manufacture – Length
EZearth 0.6/1kV PCI 2Cx2.5/2.5 sqmm KUKDONG IEC 60332-3A – Year of manufacture – Length

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) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall 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