

Certificate No:

E-11177

File No:

827.10

Job Id:

262.1-004504-3

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Power Cable

with type designation(s)

MOR Polyrad XT-125, Type P, DPCP & TPCP & FPCP & QPCP 0,6/1 kV

Issued to

General Cable

WILLIMANTIC CT, United States

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**IEEE 1580 (2010)****IEEE 45 1998****IEC 60332-3-22 (2009-02)**

Application :

General power and lighting, control.**Mud resistant according to NEK606.****Voltage class (kV) 0,6/1**
Temp. class (°C) 95This Certificate is valid until **2015-06-30**.Issued at **Høvik** on **2014-08-26**for **DNV GL**DNV GL local station: **New York**Approval Engineer: **Ivar Bull**

Marit Laumann
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. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

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Product description

Type: MOR POLYRAD XT-125, Type P, DPCP, TPCP, FPCP and QPCP 0,6/1 kV

| | |
|---------------|--|
| Conductors: | Tinned stranded copper |
| Insulation: | XLPO(Cross-linked Polyethylene) (Type P) |
| Filler: | Flame Retardant, Non-hygroscopic Polypropylene (as needed) |
| Outer Sheath: | Chlorosulfonated Polyethylene (Type CP) |

| Number of cores x conductor cross- section | | Overall diameter | |
|--|----------|------------------|--------|
| mm ² | AWG/ MCM | mm | inches |
| 2 x 7,57 | 8 | 15,09 | 0,594 |
| 2 x 12,48 | 6 | 17,07 | 0,672 |
| 2 x 18,52 | 5 | 20,07 | 0,790 |
| 2 x 21,49 | 4 | 21,08 | 0,830 |
| 2 x 25,58 | 3 | 23,75 | 0,935 |
| 2 x 30,70 | 2 | 25,53 | 1,005 |
| 2 x 46,05 | 1 | 29,74 | 1,171 |
| 2 x 56,29 | 1/0 | 32,23 | 1,269 |
| 2 x 66,53 | 2/0 | 34,16 | 1,345 |
| 2 x 92,11 | 3/0 | 39,60 | 1,559 |
| 2 x 112,59 | 4/0 | 42,29 | 1,665 |
| 2 x 133,06 | 262 | 45,59 | 1,795 |
| 2 x 158,65 | 313 | 49,15 | 1,935 |
| 3 x 7,57 | 8 | 16,28 | 0,641 |
| 3 x 12,48 | 6 | 18,42 | 0,725 |
| 3 x 18,52 | 5 | 22,68 | 0,893 |
| 3 x 21,49 | 4 | 23,77 | 0,936 |
| 3 x 25,58 | 3 | 25,15 | 0,990 |
| 3 x 30,70 | 2 | 27,07 | 1,066 |
| 3 x 46,05 | 1 | 31,62 | 1,245 |
| 3 x 56,29 | 1/0 | 34,31 | 1,351 |
| 3 x 66,53 | 2/0 | 37,41 | 1,473 |
| 3 x 92,11 | 3/0 | 42,69 | 1,681 |
| 3 x 46,36 | 4/0 | 46,36 | 1,825 |
| 3 x 133,06 | 262 | 49,93 | 1,966 |
| 3 x 158,65 | 313 | 53,77 | 2,117 |
| 3 x 189,35 | 373 | 57,33 | 2,257 |
| 3 x 224,97 | 444 | 62,48 | 2,460 |
| 3 x 271,24 | 535 | 68,10 | 2,681 |
| 3 x 327,53 | 646 | 74,01 | 2,914 |

| Number of cores x conductor cross- section | | Overall diameter | |
|--|----------|------------------|--------|
| mm ² | AWG/ MCM | mm | inches |
| 3 x 394,06 | 777 | 79,22 | 3,119 |
| 4 x 7,57 | 8 | 17,76 | 0,699 |
| 4 x 12,48 | 6 | 20,14 | 0,793 |
| 4 x 18,52 | 5 | 24,77 | 0,975 |
| 4 x 21,49 | 4 | 26,00 | 1,024 |
| 4 x 25,58 | 3 | 27,53 | 1,084 |
| 4 x 30,70 | 2 | 29,67 | 1,168 |
| 4 x 46,05 | 1 | 34,75 | 1,368 |
| 4 x 56,29 | 1/0 | 37,75 | 1,486 |
| 4 x 66,53 | 2/0 | 41,60 | 1,638 |
| 4 x 92,11 | 3/0 | 47,69 | 1,877 |
| 4 x 112,59 | 4/0 | 50,93 | 2,005 |
| 4 x 133,06 | 262 | 54,91 | 2,162 |
| 4 x 158,65 | 313 | 59,20 | 2,331 |
| 4 x 189,35 | 373 | 63,17 | 2,487 |
| 4 x 224,97 | 444 | 68,83 | 2,710 |
| 4 x 271,24 | 535 | 74,96 | 2,951 |
| 4 x 327,53 | 646 | 83,53 | 3,288 |
| 5 x 7,57 | 8 | 19,47 | 0,766 |
| 5 x 12,48 | 6 | 23,16 | 0,912 |
| 5 x 18,52 | 5 | 27,20 | 1,071 |
| 5 x 21,49 | 4 | 28,57 | 1,125 |
| 5 x 25,58 | 3 | 30,29 | 1,193 |
| 5 x 30,70 | 2 | 32,69 | 1,287 |
| 5 x 46,05 | 1 | 38,38 | 1,511 |
| 5 x 56,29 | 1/0 | 43,27 | 1,703 |
| 5 x 66,53 | 2/0 | 45,87 | 1,806 |
| 5 x 92,11 | 3/0 | 52,60 | 2,071 |
| 5 x 112,59 | 4/0 | 56,24 | 2,214 |


Application/Limitation

The requirements of SOLAS Amendments 1981 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

Type tests according to IEEE 45, IEC 60092-350 and IEC 60332-3 cat A.



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Marking of product

MOR POLYRAD XT-125, Type P, DPCP or TPCP or FPCP or QPCP, size, 0,6/1 kV –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 is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and 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 TA Certificate.
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Survey to be performed at least every second year.

END OF CERTIFICATE