

Type Approval Certificate Extension

This is to certify that Certificate No.98/00003 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	DRAKA Norsk Kabel AS
PLACE OF PRODUCTION	Kjerraten 16 P.O. Box 369 Bragernes, N-3001 Drammen, Norway
DESCRIPTION	Flame retardant and fire resistant halogen-free, armoured and individually screened pair/triple instrument and communication cable
TYPE	BFCU (c)-250V, (MGT/EPR/EPR/GSWB/LSF) BFCU (i)-250V, (MGT/EPR/EPR/GSWB/LSF)
APPLICATION	Fixed wiring on ships, offshore and industrial installations
STANDARD	Conductor: BS 6360 - tinned, annealed, stranded and flexible copper (see range) Insulation: BS 7655 Section 1.2 - EPR, type GP4 Screen: Laminated AI/PETP-tape with tinned flexible copper drain wire Bedding: EPR compound Armour: Galvanised steel wire braid Outer sheath: BS 7655 Section 2.6, type SW4 Design guide: BS 7917 or 6883 Fire resistance: IEC 60331 Flame redundancy: IEC 60332-3-22 IEC 60332-1
RATINGS	250 V
Certificate No.	08/70026(E3)
Issue Date	24 October 2008
Expiry Date	07 January 2013
Sheet	1 of 2


Poul Erik Hansen

Copenhagen Design Support Centre

Lloyd's Register EMEA
Strandvejen 104A, DK-2900 Hellerup

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RANGE	No. of Pairs	Cross Sectional Area (mm ²)
	1	0.75 to 1.5
	2	0.75 to 1.5
	3	0.75 to 1.5
	5	0.75 to 1.5
	7	0.75 to 1.5
	10	0.75 to 1.5
	12	0.75 to 1.5
	19	0.75 to 1.5
	27	0.75 to 1.5
	37	0.75 to 1.5

**OPERATIONAL
LIMITATIONS**

Maximum conductor temperature 90°C.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No TA08/70026(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No.98/00003(E2) to which this extension should be attached.

Certificate No. 08/70026(E3)
Issue Date 24 October 2008
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Sheet 2 of 2



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Marine Design Appraisal Document

Lloyd's Register EMEA
Copenhagen Design Support Centre
Strandvejen 104A-DK 2900 Hellerup
Phone: +45 3296 1800
Fax: +45 3296 1881

Date
24 October 2008
Quote this reference on all future communications
TA/I085426/0812137/PEH

THE LR TYPE APPROVAL SYSTEM, 2002

Issued to: DRAKA NORSK KABEL AS, Drammen, Norway
for: FLAME RETARDANT AND FIRE RESISTANT HALOGEN FREE, INDIVIDUALLY SCREENED PAIR/TRIPLE INSTRUMENT AND COMMUNICATION CABLE, Types BFCU(c), 250V & BFCU(i), 250V
TYPE APPROVAL CERTIFICATE No. 08/70026(E3)

The under-noted documents have been reviewed for compliance with the requirements of the LR Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

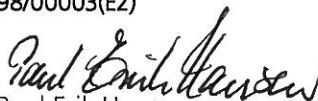
APPROVAL DOCUMENTATION

Request for Services	07.07.2008
Draka Norsk Kabel letter to LR Oslo	07.07.2008

DATA SHEETS / TEST REPORTS

Spec Sheet: Draka Cableteq, Marine, Oil and Gas International BFCU(i) 250V(2); MGT/ERP/EPR/GSWB/LSF. page 01 - 05	15.02.2007
Spec Sheet: Draka Cableteq, Marine, Oil and Gas International BFCU(c) 250V(2); MGT/ERP/EPR/GSWB/LSF. page 01 - 04	15.02.2007
DNV Certificate No. 96-OSL-AQ-6500; ISO 9001:2000	25.01.2008
DNV Certificate No. 97-OSL-SYMI-8009; ISO 14001:2004	25.01.2008

All other Approval Documentation/ Test Reports as listed on the Previous Design Appraisal Document no. 98/00003(E2)


Poul Erik Hansen
Senior Surveyor, Electrical Section

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval than for any other use, nor approval of any product(s) designed or manufactured otherwise in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register of Shipping reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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is a member of the Lloyd's Register Group

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Part 1B

Subject: Electrical Equipment (Not Environmentally Tested)

Product: Cables Control, Telecommunication and Instrumentation (Part 1B)

Producer/Licence No.		Description of Product			Cert. No.																						
Type	Details of Approval	Application	Remarks																								
Draka Norsk Kabel AS Kjerraten 16, P.O.Box 369 Bragernes, N-3001 Drammen, Norway.	Fire retardant and fire resistant, halogen-free, armoured, individually screened pair/triple instrument and communication cable. Tinned, annealed, stranded and flexible copper (see range) Insulation: EPR, type GP7 Laminated Al/PETP-tape with tinned flexible copper drain wire Bedding: EPR compound Armour: Galvanised steel wire braid Outer sheath: Low emission type SW4 Rating (V): 250 Range: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>No. of Pairs</th> <th>Cross Sectional Area (mm²)</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.75 to 1.5</td></tr> <tr><td>2</td><td>0.75 to 1.5</td></tr> <tr><td>3</td><td>0.75 to 1.5</td></tr> <tr><td>5</td><td>0.75 to 1.5</td></tr> <tr><td>7</td><td>0.75 to 1.5</td></tr> <tr><td>10</td><td>0.75 to 1.5</td></tr> <tr><td>12</td><td>0.75 to 1.5</td></tr> <tr><td>19</td><td>0.75 to 1.5</td></tr> <tr><td>27</td><td>0.75 to 1.5</td></tr> <tr><td>37</td><td>0.75 to 1.5</td></tr> </tbody> </table>	No. of Pairs	Cross Sectional Area (mm ²)	1	0.75 to 1.5	2	0.75 to 1.5	3	0.75 to 1.5	5	0.75 to 1.5	7	0.75 to 1.5	10	0.75 to 1.5	12	0.75 to 1.5	19	0.75 to 1.5	27	0.75 to 1.5	37	0.75 to 1.5	Fixed wiring on ships, offshore and industrial installations	Expires: 07 January 2013 BS 7917 or 6883 BS 6360 BS 7655 Section 2.6 BS 7655 Section 2.6 IEC 60331 IEC 60332-3-22 IEC 60332-1 Max conductor temperature 90°C in order to comply with the Ships Rules.		08/70026(E3)
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