

## Type Approval Certificate Extension

This is to certify that Certificate No.98/00007 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	DRAKA Norsk Kabel AS
<b>PLACE OF PRODUCTION</b>	Kjerraten 16 P.O. Box 369 Bragernes, N-3001 Drammen, Norway
<b>DESCRIPTION</b>	Flame retardant, halogen-free, multicore power cable
<b>TYPE</b>	RFCU 0.6/1kV, EPR/EPR/GSWB/LSF
<b>APPLICATION</b>	Fixed wiring on ships, offshore and industrial installations
<b>STANDARD</b>	Conductor: BS6360 - tinned, annealed, stranded copper Insulation: BS 7655 section 1.2 - EPR, type GP4 Bedding: EPR compound Armour: Galvanised steel wire braid Outer sheath: BS 7655 Section 2.6, type SW4 Design guide: BS 6883 Flame retardance: IEC 60332-3-22 IEC 60332-1
<b>RATINGS</b>	0.6/1kV
<b>OPERATIONAL LIMITATIONS</b>	Maximum conductor temperature 90°C.
<b>Certificate No.</b>	08/70023(E3)
<b>Issue Date</b>	24 October 2008
<b>Expiry Date</b>	07 January 2013
<b>Sheet</b>	1 of 2

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

  
Poul Erik Hansen  
Copenhagen Plan Approval Centre

*"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 TA08/70023(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No.98/00007(E2) to which this extension should be attached.

<b>Certificate No.</b>	08/70023(E3)
<b>Issue Date</b>	24 October 2008
<b>Expiry Date</b>	07 January 2013
<b>Sheet</b>	2 of 2

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

  
Poul Erik Hansen  
Copenhagen Plan Approval Centre



# 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/I085426/00812137/PEH

## THE LR TYPE APPROVAL SYSTEM, 2002

Issued to: DRAKA NORSK KABEL AS, Drammen, Norway  
for: FLAME RETARDANT HALOGEN FREE, POWER CABLE Type RFCU 0.6/1kV  
TYPE APPROVAL CERTIFICATE No. 08/70023(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
All other Approval Documentation/ Test Reports as listed on the Previous Design Appraisal Document no. 98/00007(E2)	20.11.2003

### DATA SHEETS / TEST REPORTS

Spec Sheet: Draka Cableteq, Marine, Oil and Gas International RFCU 0.6/1kV; EPR/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

  
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

Lloyd's Register EMEA  
is a member of the Lloyd's Register Group

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

**Part 1B**  
**Subject: Electrical Equipment (Not Environmentally Tested)**  
**Product: Cables Power (Part 1B)**

Producer/Licence No.		Type	Description of Product			Cert. No.
Details of Approval		Application	Remarks			
Draka Norsk Kabel AS, Kjerraten 16, P.O.Box 369 Bragernes, N-3001 Drammen Norway.		RFCU 0.6/1 kV EPR/EPR/GSWB/ LSF	Flame retardant halogen-free multicore power cables, EPR insulation, galvanised steel wire armour braiding. <u>Number of cores</u> 2 3 4 5 & 7 7,12,19,27 Rated voltage: 0.6/1 kV Maximum conductor temperature 90°C	Fixed wiring on ships, offshore and industrial installations	Expires: 7 January 2013 Designed and tested to: BS 6360 IEC 60332-1 IEC 60332-3-22 BS 6883 BS 7655 Sections 1.2 and 2.6	08/70023(E3)