

Type Approval Certificate Extension

This is to certify that Certificate No.98/00006 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, halogen-free, collectively and individually screened pair/triple instrument and communication cable
TYPE	RFCU (c)-250V collective screen, EPR/EPR/GSWB/LSF RFCU (i)-250V, individual screen, EPR/EPS/GSWB/LSF
APPLICATION	Fixed wiring on ships, offshore and industrial installations
STANDARD	Conductor: BS6360 - tinned, annealed, stranded and flexible copper Insulation: BS 7355 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 6883 Flame retardant IEC 60332-3-22 IEC 60332-1
RATINGS	250V
Certificate No.	08/70024(E3)
Issue Date	24 October 2008
Expiry Date	07 January 2013
Sheet	1 of 2

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


Poul Erik Hansen
Copenhagen Plan Approval Centre

"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."

<u>RANGE</u>	<u>No. of Pairs</u>	<u>Cross Sectional Area (mm²)</u>
	1	0.75 to 1.5
	2	0.75 to 1.5
	3	0.75 to 1.5
	7	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
	<u>No. of Triples</u>	
	3, 7, 12	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 TA08/70024(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No.98/00006(E2) to which this extension should be attached.

Certificate No. 08/70024(E3)
 Issue Date 24 October 2008
 Expiry Date 07 January 2013
 Sheet 2 of 2


 Poul Erik Hansen

Copenhagen Plan Approval Centre

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

"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."



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, COLLECTIVE/INDIVIDUALLY SCREENED PAIR/TRIPLE INSTRUMENT/COMMUNICATION
CABLE (RFCU-250V)
TYPE APPROVAL CERTIFICATE No. 08/70024(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. 98/00006(E2)

DATA SHEETS / TEST REPORTS

Spec Sheet: Draka Cableteq, Marine, Oil and Gas International RFCU(i) 250V(2); ERP/EPR/GSWB/LSF. page 01 -04 15.02.2007
Spec Sheet: Draka Cableteq, Marine, Oil and Gas International BFCU(c) 250V(2); 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


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 Control, Telecommunication and Instrumentation (Part 1B)

Producer/Licence No.		Description of Product			Cert. No.
Type	Details of Approval	Application	Remarks		
<p>Draka Norsk Kabel AS, Kjerraten 16, P.O.Box 369, Bragernes, N-3001 Drammen, Norway.</p>	<p>RFCU (c) RFCU (i) 250 V</p>	<p>Flame retardant, halogen-free, collectively or individually screened pair / triple instrument and communication cable. Tinned, annealed, stranded and flexible copper (see range) Insulation: EPR, type GP4 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: No. of Pairs Cross Sectional Area (mm²) 1 0.75 to 1.5 2 0.75 to 1.5 3 0.75 to 1.5 7 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 No. of Triples 3, 7, 12</p>	<p>Fixed wiring on ships, offshore and industrial installations</p>	<p>Expires: 7 January 2013 BS 6899 BS 6883 BS 7655 Section 2.6 IEC 60228 IEC 60332-1 IEC 60332-3 -22 Max conductor temperature 90°C.</p>	<p>08/70024(E3)</p>