

## Type Approval Certificate Extension

This is to certify that Certificate No. 91/00030(E3) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	Draka Marine Oil and Gas International 1610 Greens Road Suite 200 Houston, TX 77032 United States of America (USA)
<b>PLACE OF PRODUCTION</b>	Draka Norsk Kabel AS Kjerraten 16 N-3001 Drammen Norway
<b>DESCRIPTION</b>	Flame retardant, fire resistant, halogen free power/control cable.
<b>TYPE</b>	BFOU 0.6/1kV

*"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.91/00030(E4) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

**All other details remain as the previous Certificate No. 91/00030(E3) to which this extension should be attached.**

<b>Certificate No.</b>	91/00030(E4)
<b>Issue Date</b>	24 February 2008
<b>Expiry Date</b>	12 September 2011
<b>Sheet</b>	1 of 1



M.H.A. Rufaie  
London Design Support Services  
Lloyd's Register EMEA

Lloyd's Register EMEA  
71 Fenchurch Street, London EC3M 4BS

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Document number 91/00030(E4)
Issue number 1

**DESIGN APPRAISAL DOCUMENT**

Date 24 February 2008	Quote this reference on all future communications LDSS/PAS/TA/W01505909/MHR/O- 89141
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.**  
**Issued to: DRAKA MARINE OIL AND GAS INTERNATIONAL**  
**For: FLAME RETARDANT HALOGEN FREE POWER/CONTROL CABLE**  
**Type: BFOU 0.6/1kV**  
**TYPE APPROVAL CERTIFICATE No. 91/00030(E4)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

**ADDITIONAL APPROVAL DOCUMENTATION**

Request form	
Draka Cableteq / Marine, Oil & Gas International letter	30.01.2006
Draka Comteq / Multimedia cable	24.05.2007
LR Oslo email	16.08.2007
LR Oslo email	02.10.2007

**Data Sheets**

BFOU 1kV(3).doc	29.12.2006
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**TEST REPORTS**

DNV Certificate No. E-8371	11.05.2007
DNV Certificate No. 97-OSL-SYMI-8009	09.09.2005
DNV Certificate No. 96-OSL-AQ-6500	09.09.2005

Also all the documentation listed on Design Appraisal Documents associated with Type Approval Certificates Nos. 91/00030, 91/00030(E1), 91/00030(E2) and 91/00030(E3)

**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 for any other use, nor approval of any product(s) designed or manufactured otherwise than 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 EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.*



**Lloyd's Register EMEA (London Office)**

LONDON DESIGN SUPPORT SERVICES

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M.H.A. RUFAlE

Lead Specialist

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Part 1B

Subject: Electrical Equipment (Not Environmentally Tested)

Product: Cables Power (Part 1B)

Producer/Licence No.		Description of Product			Cert. No.
Type	Details of Approval	Application	Remarks		
BFOU 0.6/1 kV  Draka Marine Oil and Gas International, 1610 Greens Road, Suite 200, Houston, TX 77032, United States of America (USA).	Flame retardant halogen free, power/control cable. Flame retardance IEC 60332-3 Cat A Fire resistance IEC 60331 Halogen-free IEC 60754-1  Insulation: Mica fire resistant tape/EPR Bedding: Halogen free (<0.5%) elastomer SHF2 Conductor size (mm <sup>2</sup> ) No of cores 1.6 to 330            1 1.5 to 16            2 1.5 to 120           3 1.5 to 95            4 1.5 & 2.5           7 to 37  Rated voltage: 0.6/1kV Maximum conductor temperature: 85°C	Fixed wiring on ships and offshore installations	Expires: 12 September 2011	91/00030(E4)	

24 FEB 2008  
M/ta