

Type Approval Certificate

This is to certify that the undernoted products have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER ERSE KABLO IMALATI SAN. ve TIC. LTD. STI.

PLACE OF PRODUCTION Ortakoy Sanayi Bolgesi 152 Ada 13 Parsel Selimpasa
Silivri - Istanbul
Turkey

DESCRIPTION Fire retardant/Fire resistant marine low voltage power cables

TYPE Power cables:
MX, MXY, MXH, MHH, MYY, MXCH, MHCH, MSY, MYCY, MXY, MXCH-FR, MXH-FR

FR = Fire Resistant

APPLICATION Marine and offshore use

SPECIFIED STANDARDS IEC 60092-350:2008, IEC 60092-351:2004, IEC 60092-353:2011, IEC 60092-359:1999 , IEC 60228:2005, IEC 61034-2:2005, IEC 60331-1&2, EN50267-2-2

RATINGS Rated voltage: 0.6/1kV.

No. of cores	Conductor cross section (mm ²)
1	150/185/240
1-4	6/10/16/25/35/50/70/95/120
1-36	1.5/2.5/4

OPERATIONAL LIMITATIONS Max. conductor temperature: 90C°

Certificate No. 12/00007

Issue Date 21 February 2012

Expiry Date 20 February 2017

Sheet 1 of 2



T.C. Morrison
London Design Support Office
Lloyd's Register EMEA

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

"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 Design Appraisal Document No. 12/00007 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	12/00007
Issue Date	21 February 2012
Expiry Date	20 February 2017
Sheet	2 of 2



T.C. Morrison
London Design Support Office
Lloyd's Register EMEA

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

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.

Page 1 of 1
Document number 12/00007
Issue number 1

DESIGN APPRAISAL DOCUMENT

Date 21 February 2012	Quote this reference on all future communications LDSSS/ETS/TCM/TTP/WP2480274/W01987627
--------------------------	--------------------------------------------------------------------------------------------

LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.

Issued to: ERSE KABLO IMALATI SAN. VE TIC. LTD. STI.

for: FIRE RETARDANT/FIRE RESISTANT MARINE LOW VOLTAGE POWER CABLES

Type: MX, MXY, MXH, MHH, MYY, MXCH, MHCH, MXY, MYCY, MXCY, MXCH-FR, MXH-FR,

TYPE APPROVAL CERTIFICATE No. 12/00007

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.

APPROVAL DOCUMENTATION

Request form	13 February 2009
LR Memorandum DAPP/PAS/TA/0000001/ABG/O-97672	18 February 2009
Comment Response Sheet CSR2 LDSSS/ETS/ABG/W01987627/1	22 April 2010
Email message clarifying Comment Response Sheet CSR2 items	13 September 2011
LR Istanbul email clarifying cable details	27 January 2012

TEST REPORTS

Inspection and surveillance of production facilities IST0960048	25 August 2009
Technical specification of ship cables E.TS.20 Rev.0	20 June 2008
Technical specification of fire resistant ship cables E.TS.22 Rev.0	30 October 2008
Test report for fire retardant power cables	27 August 2009
Test report KLT F.07 for fire retardant and fire resistant power and control cables	01 June 2011

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.

T.C. Morrison
 London Design Support Office
 Lloyd's Register EMEA



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						
ERSE KABLO IMALATI SAN. ve TIC. LTD. STI., Ortakoy Sanayi Bolgesi 152 Ada 13 Parsel Selimpasa, Silivri - Istanbul, Turkey.	Power cables: MX, MXY, MXH, MHH, MYY, MXCH, MHCH, MXY, MYCY, MXY, MXCH-FR, MXH-FR	Fire retardant/Fire resistant marine low voltage power cables	Fixed wiring on marine and offshore installations	Expires: 20 February 2017 IEC 60092-350:2008, IEC 60092-351:2004, IEC 60092-353:2011, IEC 60092-359:1999, IEC 60092-376:2003, IEC 60228:2005, IEC 61034-2:2005, IEC 60331-1&2, EN50267-2-2	12/00007					
		<table border="1"> <thead> <tr> <th>Voltage (kV)</th> <th>No. of cores</th> <th>Cross sectional area (mm²)</th> </tr> </thead> <tbody> <tr> <td>0.6/1kV</td> <td>1-4</td> <td>150/185/240 6/10/16/25/35/50/70/ 95/120</td> </tr> <tr> <td></td> <td>4-36</td> <td>1.5/2.5/4</td> </tr> </tbody> </table>				Voltage (kV)	No. of cores	Cross sectional area (mm ²)	0.6/1kV	1-4
Voltage (kV)	No. of cores	Cross sectional area (mm ²)								
0.6/1kV	1-4	150/185/240 6/10/16/25/35/50/70/ 95/120								
	4-36	1.5/2.5/4								