

## EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

### This is to certify:

**That the Fire-fighter`s outfit: protective clothing (close proximity clothing)**

with type designation(s)

**Firefighter's protective suit FYRPRO® 440.**

Issued to

**I.S.T. Isci Sagligi Techizati Sanayi ve Ticaret Ltd. Sti.  
Ankara, Turkey**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

**Annex A.1, item No. A.1/3.3 and Annex B, Module B in the Directive; SOLAS 74 as amended,  
Regulation II-2/10 & X/3, 2000 HSC Code 7 and FSS Code 3**

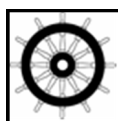
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-01-25.**

Issued at **Hamburg** on **2017-01-26**

DNV GL local station:  
**Istanbul**

Approval Engineer:  
**Timo Linn**



Notified Body  
No.: **0098**

for **DNV GL SE**

**Sven Dudsus**  
**Head of Notified Body**

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



## Product description

Firefighter's protective suit FYRPRO® 440, Article No. 13152344 comprising overjacket and overtrousers with reflective stripes, Scotchlite, 3M article 9687 yellow/silver/yellow meets the X2, Y2 and Z2 performance levels.

Outer material: Nomex-fabric Ref.8022, approx 200 g/m<sup>2</sup>, 75% m-aramid, 23% p-aramid, 2% anti-static fibre – navy or other colours of the same dye stuff class.

Moisture Barrier: Knitted fabric with PU-Membrane, Ref.H024 approx. 150 g/m<sup>2</sup>, (membrane to the inner layer)

Inner layer: Quilted fabric, Ref.4262 S, approx. 280 g/m<sup>2</sup>, fabric is 50% aramid and 50% viscose FR quilted with 100% aramid.

The specimen was tested as follows:

Evaluation:

### FABRIC

Flame spread to EN ISO 150525:2002 Method A	Met
Heat transfer –flame- to EN 367:1992	LEVEL Xf2
Heat transfer –radiation- to EN ISO 6942:2002, Method B at 40kW/m <sup>2</sup>	LEVEL Xr2
Residual strength EN ISO 6942: 2002 EN ISO 13034-1:1999, Method A 10kW/m <sup>2</sup>	Met
Heat resistance / shrinkage ISO 17493:2000, 5 minutes at 180°C	Met
Tensile strength EN ISO 13934-1:1999	Met
Seam strength EN ISO 13935-2:1999	Met
Tear strength EN ISO 13937-2:2000 Method B	Met
Surface wetting after pre-treatment EN 24920: 2002	Met
Dimension change after pre-treatment ISO 5077 / ISO 6330	Met
Resistance to penetration by liquid chemicals to ISO 6530: 2005	
40% NaOH	Met
36% HCl	Met
30% H2SO4...	Met
100% O-xylene	Met
Resistance to water penetration EN 20811:1992	LEVEL Y2
Water vapour resistance EN 31092: 1993	LEVEL Z2
Innocuousness pH-value EN ISO 3071:2006	Met
Colour fastness to perspiration, alkaline and acid EN ISO 105-E04	Met
Amines derived from AZO colorants EN 14362-1	Met

### RETRO-REFLECTIVE STRIPES

Design of stripes EN469:2005, Annex B	Met
Retro-reflective performance EN471, Table 5	Met
Retro-reflection after heat resistance EN471, Item 6.2	Met
Limited flame spread EN ISO 15025	Met

### GARMENT DESIGN AND CONSTRUCTION

Clothing design EN 469:2005	Met
Ergonomics and sizes EN469:2005	Met
Care behaviour EN 340:2003	Met
Labelling EN 469:2005 and EN 340:2003	Met
Information for use EN 469:2005 and EN 340:2003	Met
Release of nickel from metal which could come into contact with the skin EN 1811	Met

Job Id: **344.1-006454-2**  
Certificate No: **MEDB000024B**

### **Application/Limitation**

Approved for use as protective clothing for fire fighters.

Each product is to be supplied with its manual for use and maintenance.

The protective clothing shall be worn together with approved boots, gloves and helmet in accordance with the directive 2009/26/EC Annex A.1.

### **Type Examination documentation**

EC type examination certificate and certificate report STFI No.Z 4247/09-5611/10 dated 5th March 2010 and test report STFI No.1547.1/09 dated 4th March 2011 issued by the Sächsisches Textilforschungsinstitut e.V.(STFI), Chemnitz, Germany.

### **Tests carried out**

EN 469: 2005 including A1:(2006) and AC:(2006)

### **Marking of product**

The product is to be marked with name and address of the manufacturer, type designation, fire technical rating and MED Mark of Conformity and USCG approval number if applicable (see first page).