

## CERTIFICATE OF FIRE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

<b>Manufacturer</b>	Trox (Malaysia) Sdn. Bhd.
<b>Address</b>	20 Persiaran Bunga Tannjung 1 Senawang Land Industrial Park 70400 Seremban Negeri Sembilan Malaysia
<b>Type</b>	<b>FIRE DAMPER (STANDARD FIRE TEST)</b>
<b>Description</b>	Single/Multi Blade Damper - Type: "JFD"
<b>Specified Standard</b>	IMO Fire Test Procedures Code, Annex 1, Part 3

The attached Design Appraisal Document forms part of this certificate.  
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	23 February 2006	Expiry date	14 December 2010
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Certificate No.	SAS F050413/M1
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Signed



Sheet No	1 of 2
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Name

M. Farrier  
Surveyor to Lloyd's Register EMEA  
A Member of the Lloyd's Register Group

**Note:**

**This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.**

"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."

**DESIGN APPRAISAL DOCUMENT**

Date 23 February 2006	Quote this reference on all future communications LPA/SPS/FITA/MF
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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F050413/M1**

This Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Far East Fire Testing Centre, Shanghai, People's Republic of China, Fire Test Report No. FT05151 and FT05152 both dated 28 September 2005.

**CONDITIONS OF CERTIFICATION**

1. For use in 'A-0' divisions, and 'A-15', 'A-30' and 'A-60' divisions with ducting suitably insulated.
2. Maximum size of duct: 1350mm x 1150mm
3. Maximum clear open size of damper: 1250mm x 1050mm
4. damper consists of single/multi blade fire dampers with insulated blades
5. 900mm of duct including damper to be insulated in all cases.
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

**PLACE OF PRODUCTION**

Trox (Malaysia) Sdn. Bhd  
20 Persiaran Bunga Tannjung 1  
Senawang Land Industrial Park  
70400 Seremban  
Negeri Sembilan  
Malaysia

Lloyd's Register Asia

  
Kuala Lumpur Office

Lloyd's Register

Martin Farrier  
Lead Specialist  
Safety & Pollution Services  
London Plan Approval  
Lloyd's Register EMEA

**Supplementary Type Approval Terms and Conditions**

*This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) 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 products designed or manufactured otherwise than in strict conformity with the said prototype(s).*