

Loss Prevention Certification Board



This is to certify

LPG Tecnicas en Extincion de Incendios S.A.
Mestre Joan Corrales 107-109, 08950 Espluges de Llobregat,
Barcelona, Spain

is authorised to use the LPCB mark in association with the
product(s) listed in this certificate and appendix.

'LPG FE-13' and LPG 'Inert 55' Fixed gaseous fire extinguishing systems

which have complied with the requirements of the following:

**LPS 1230 - Requirements for Fire Testing of Fixed Gaseous Fire
Extinguishing systems**

Certificate No. 446b

Issue No. 2

Date of Issue 1 June 2006

This certificate is valid until withdrawn by LPCB.
To check the validity and the authenticity of this certificate please
visit our website www.RedBookLive.com or contact us.

Signed on behalf of the LPCB


Name: B.W. Lywood



LPCB is part of BRE Certification Ltd., Garston, Watford WD25 9XX. Tel +44 (0)1923 664100
Fax +44 (0)1923 664603 www.RedBookLive.com

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APPENDIX TO CERTIFICATE NO. 446b

LPG Tecnicas en Extincion de Incendios S.A.

LPG FE-13 Fixed gaseous fire extinguishing system

Product Name	Risk	Design Concentration	Comments	LPCB Ref. No.
LPG FE-13	Class A Standard (Solid Fires e.g. paper, wood, plastics)	15.9%	Design concentration includes 30% safety factor	446b/01
	Class A Cables (Solid fire risks including cables)	16.5%	Confirmation that minimum safety factor is adequate	
	Class B (Liquid Fires e.g. heptane)	16.1%	Design concentration includes 30% safety factor	

Design concentration Class A Standard and Class B = Extinguishing concentration x safety factor (minimum 1.3).
Design concentration Class A Cables System test concentration. Where this value is lower than the Class A Standard value, the Class A Standard value should be used for design purposes.
Design concentrations are as tested to LPS 1230 in BRE Test Report Number 206580.
Extinguishment concentrations are as tested in BRE Test Report Number 206579 (ISO 14520-1 tests)

This system uses:

Design Manual: MD/FE/IN-01 Rev 5

Software Programme : Firenet version 2.5, LPC, Nov. 2001.

Installation, Maintenance and User Manual for FE-13 Fire Extinguishing Systems, MU/FE/IN_02 Rev: 00

- This system is suitable for storage in environmental conditions from -20° to 55°.
- System pressure is specified as 41 bar @ 20°C and container maximum filling density is 0.85 kg/l.
- Systems are not superpressurized.

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APPENDIX TO CERTIFICATE NO. 446b

LPG Tecnicas en Extincion de Incendios S.A.

LPG 'Inert 55' 200 bar and 300 bar Inert Gaseous Fire Suppression System

Product Name	Risk	Design Concentration	Comments	LPCB Ref. No.
Inert 55	Class A Standard (Solid fires e.g. paper, wood, plastics)	41.0%	Design concentration includes 30% safety factor	446b/02
	Class A Cables (Solid fires risks including cables)	45.6%	Confirmation that minimum safety factor is adequate	
	Class B (Liquid Fires e.g.heptane)	45.2%	Design concentration includes 30% safety factor	

Design concentration Class A Standard and Class B = Extinguishing concentration x safety factor (minimum 1.3).
Design concentration Class A Cables System test concentration. Where this value is lower than the Class A Standard value, the Class A Standard value should be used for design purposes.
Design concentrations are as tested to LPS 1230 in BRE Test Report Number 213932
Extinguishing concentrations are as tested in BRE Test Report Number 216936 (ISO 14520-1 tests).

This system uses:

Design Manual: MD/55/01/IN

Software Program: VdS Schadenverhütung calculation package version 4.6a.

This system is suitable for storage and environmental conditions from -20° to 50°.

System pressure is specified as 200 bar and 300 bar at 15°C.

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