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Document number 13/00036
Issue number 1

**DESIGN APPRAISAL DOCUMENT**

Date 7 May 2013	Quote this reference on all future communications LDSO/ENG/PAS/WP12767677/W03221895
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002.**

**Issued to: COBALT BLUE LTD**

**for: FLEXIBLE HOSES FOR CO2 FIRE FIGHTING SYSTEMS**

**TYPE APPROVAL CERTIFICATE No. 13/00036**

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**

Application for Type Approval form

Inspection and Surveillance of Production Facilities form

02 May 2013

05 February 2013

**TEST REPORTS**

Burst test report ½ inch 2SN	08-02-2013
DNV Type Approval Certificate P-13373	11-03-2010
Alfagoma certificate of authorisation AUT 07/2012	20-11-2012
DNV Authorisation as hose assembler	17-12-2012
Alfagoma hose guidelines	01-04-2008
LR visit report PIR1207887	17-12-2012
LRQA Certificate of Approval PIR0361349	08-12-2012
LR Type Approval Certificate no. 07/00065(E2)	18-09-2012

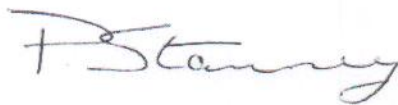
**Supplementary Type Approval Terms and Conditions**

*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.*



P A Stanney  
Machinery Specialist  
London Design Support  
Lloyd's Register EMEA

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## 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:

<b>PRODUCER</b>	Cobalt Blue Ltd
<b>PLACE OF PRODUCTION</b>	Filonos 98B 18536 Piraeus Greece
<b>DESCRIPTION</b>	Flexible rubber hoses reinforced by two steel wire braids complete with end fittings.
<b>TYPES</b>	Alfagoma flexible hose type 2SN. Sizes ¼ to ¾ inch. 11SMnPb30 no skive straight and 90 degree fittings.
<b>APPLICATION</b>	For use in high pressure CO2 systems as a connection between the valves and manifolds.
<b>SPECIFIED STANDARDS</b>	Lloyd's Register's Rules and Regulations for the Classification of Ships 2012. EN 853, SAE J517.
<b>RATINGS</b>	Minimum temperature. -60 deg.C. Maximum working pressure 180 bar
<b>Certificate No.</b>	13/00036
<b>Issue Date</b>	7 May 2013
<b>Expiry Date</b>	6 May 2018
<b>Sheet</b>	1 of 2

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

  
P.F. Moysey  
London Design Support Office  
Lloyd's Register EMEA

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## OTHER CONDITIONS


The CO2 installation is to be installed in accordance with the manufacturer's instructions and recommendations and in accordance with statutory requirements for fire safety systems.

*"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. 13/00036 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

Certificate No.	13/00036
Issue Date	7 May 2013
Expiry Date	6 May 2018
Sheet	2 of 2

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