

Type Approval Certificate Extension

This is to certify that Certificate No. 13/ 00036(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Cobalt Blue Ltd
PLACE OF PRODUCTION	Filonos 98B 18536 Piraeus Greece
DESCRIPTION	Flexible rubber hoses reinforced by two steel wire braids complete with end fittings.
TYPES	Alfagoma flexible hose type 2SN. Sizes ¼ to ¾ inch. 11SMnPb30 or 11SMnPb37 no skive straight and 90 degree fittings.
APPLICATION	For use in high pressure CO2 systems as a connection between the valves and manifolds.
SPECIFIED STANDARDS	Lloyd's Register's Rules and Regulations for the Classification of Ships EN 853 SAE J517
RATINGS	Minimum temperature; - 60 deg.C. Maximum working pressure; 180 bar

Certificate No.	13/ 00036(E2)
Issue Date	06 December 2018
Expiry Date	06 May 2023
Sheet	1 of 2

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



M.H.M.Rila
Southampton Technical Support Office
Marine & Offshore Lloyd's Register

Lloyd's Register EMEA
Is a subsidiary of Lloyd's Register Group

Lloyd's Register Group Limited, 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'. Lloyd's Register 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 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.

OTHER CONDITIONS

For application on a LR classed vessel, the following conditions are to be complied with:-

1. Materials for hoses and fittings are to be manufactured and tested in accordance with the requirements for Class I piping systems.
2. 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.
3. The each flexible hose with end fittings is to be provided with the manufacturer's pressure test report and conformity of the production and the following details are to be permanently marked:
 - Manufacturer's name or trademark.
 - Date of manufacture (month/ year).
 - Designation type reference.
 - Nominal diameter.
 - Pressure rating.
 - Temperature range.

"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 attached Design Appraisal Document No. 13/00036(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate

Certificate No.	13/ 00036(E2)
Issue Date	06 December 2018
Expiry Date	06 May 2023
Sheet	2 of 2

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



M.H.M.Rila
Southampton Technical Support Office
Marine & Offshore Lloyd's Register

Lloyd's Register EMEA
Is a subsidiary of Lloyd's Register Group

Lloyd's Register Group Limited, 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'. Lloyd's Register 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 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 13/00036(E2)
Issue number 1

DESIGN APPRAISAL DOCUMENT

Date 06 December 2018	Quote this reference on all future communications SOUTSO/ENG/TA/MR/WP33242171
--------------------------	--

LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2017.
Issued to: COBALT BLUE LTD
for: FLEXIBLE HOSES FOR CO2 FIRE FIGHTING SYSTEMS
TYPE APPROVAL CERTIFICATE No. 13/00036 (E2)

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2017 and this Design Appraisal Document forms part of the Certificate.

1. APPROVAL DOCUMENTATION

Application Checklist	30-May-2018
Production Quality Assessment Form; PRJ11078953/1	10-Jul-2018

2. 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 Type Approval Certificate no. 07/00065(E2)	18-09-2012

3. CONDITION OF APPROVAL:
3.1. Hoses are manufactured by ALFAGOMMA Hydraulic SPA.

3.2. End fittings material of construction certificate should be 3.1 approved type.

3.3. It is the responsibility of the manufacturer to maintain the applicable latest tests standard/code of the flexible hoses.

4. PERIODIC ASSESSMENT:
4.1. Production Quality Assessment (PQA) will require to be conducted on or around 30 months from the date of issue stated on the certificate.

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.

M.H.M.Rila,
Senior Specialist, Piping and Pressure Systems
Engineering Systems
UK&I Technical Support Office, Marine & Offshore
Lloyd's Register EMEA


Lloyd's Register

Rila Mohamed
Southampton GTC Office
Lloyd's Register EMEA

LR031.1.2016.06