DNV·GL

Certificate No:
TAP00001SW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Seamless Gas Bottle

with type designation(s)
EN46, EN48, EN49, EN50, EN51, EN122, EN136

Issued to
Eurocylinder Systems AG
Apolda, Germany

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.7 Pressure equipment

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Type	Loading pressure:	Operating media:	Test pressure:	Filling ratio
EN46	200 bar	CO_2, N_2, Ar	300 bar	
EN48	200 bar	CO_2, N_2, Ar	300 bar	
EN49	200 bar	CO_2, N_2, Ar	300 bar	
EN50	200 bar	CO_2, N_2, Ar	300 bar	
EN51	200 bar	CO_2, N_2, Ar	300 bar	
EN122	200 bar	CO_2, N_2, Ar	300 bar	
EN136	200 bar	CO_2, N_2, Ar	300 bar	

Issued at **Hamburg** on **2019-07-08**
This Certificate is valid until **2024-07-07**.
DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Stefan Kruhl**

Harald Pauli
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Seamless steel gas cylinders for the use in fixed fire extinguishing systems.
For details of the cylinders (e. g. design data, materials or dimensions) see Approved Drawing (listed below in "Type Approval documentation").

Application/Limitation

The gas cylinders are approved according to DNV GL rules ship Pt.4 Ch.7 Sec.1 [5] (edition January 2018) and have been designed according to ISO 9809-1. The use of other media than carbon dioxide CO_2 or the service as an accumulator is outside the range of this type approval and shall be subject to special consideration in each individual case.
The cylinders are graded as DNV GL pressure equipment class I (Pt.4 Ch.7 Sec.1 table 2). The design temperature -50°C to +65 °C, the corrosion allowance 0 mm.
The manufacturer of the steel gas cylinder shall hold a valid certificate according to DNV GL CP-0261 "Pressure equipment", the pre-material (seamless steel pipe) shall be delivered by a manufacturer holding a valid certificate according to DNV GL CP-0252 "Steel pipes and steel pipe fittings".
Manufacturing, workmanship and testing of the cylinders shall be done according to ISO 9809-1 [8], [10] and [11].

Each cylinder manufactured to this type approval is to be

- constructionally checked and hydraulic pressure tested
- and certified by DNV GL and delivered with DNV GL product certificate.

Type Approval documentation

Dimensions of the shell:

Type /Dwg. No	Shell External diameter (mm)	Min. shell thickness (mm)	Volume (Liter)	Thread
EN 46 / 13 052 340 5	204	4.3	40	25E
EN 48 / 13 052 134 7	229	4.8	25	25E
EN 48 / 13 052 133 1	229	4.8	40	25E
EN 48 / 13 052 121 8	229	4.8	50	25E
EN 49 / 13 052 153 2	140	3.0	6.7	25E
EN 49 / 13 052 156 5	140	3.0	8	25E
EN 49 / 13 052 161 2	140	3.0	13.4	25E
EN 50 / 13 052 167 8	114	2.6	2.7	25E
EN 51 / 13 052 182 1	100	2.3	1.7	25E
EN 51 / 13 052 186 2	100	2.3	2.0	25E
EN 51 / 13 052 185 4	100	2.3	2.0	17E
EN 122 / 13 052 584 1	267	5.9	45	1,5"
EN 122 / 13 052 585 8	267	5.9	67.5	1,5"
EN 122 / 13 052 581 7	267	5.9	67.5	25E
EN 122 / 13 052 586 6	267	5.9	80	1,5"
EN 136 / 13 052 735 3	204	4.1	13.4	25E
EN 136 / 13 052 731 8	204	4.1	20	25E
EN 136 / 13 052 749 0	204	4.1	30	25E

Marking of product

For traceability to this type approval the steel gas cylinders shall be marked according to ISO 9809-1 [13].

Periodical assessment

The objective of the periodical assessment is to verify that the conditions for the type approval (TA) have not been altered.

The main scope of the periodical assessment will normally include:

- verification of the TA applicant's production and quality system w.r.t. ensuring continued consistent production of the TA products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products,
- review of TA documentation and that this is still used as basis for the production,
- review of possible changes in the design, the materials and the performance of the product, and
- verification of the product marking.

For retention of the TA certificate in its validity period the periodical assessments will be carried out biyearly.

Unscheduled assessments for retention of the certificate may be carried out when there is reason to believe that the type approval applicant has not adhered to the obligations stipulated in the type approval certificate.

End of Certificate