

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:**That the Manufacturer****VÍTKOVICE CYLINDERS a.s.
Ostrava-Vítkovice, Czech Republic**

is approved for the

Manufacturing of Seamless Gas Bottles and Pressure Vessels Class I and II

The approval is granted on condition that

**DNV GL class programme DNVGL-CP-0261 – Manufacture of pressure equipment
DNV GL class programme DNVGL-CP-0350 – Manufacture of pressed parts and seamless gas
cylinders**

are complied with in all respect

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

Issued at **Høvik** on **2018-05-24**for **DNV GL**This Certificate is valid until **2020-12-31**.DNV GL local station: **Ostrava**Approval Engineer: **Zeinab Sharifi**

**Marianne Spæren Marveng
Head of Section**

Approval basis

Product Categories

- Seamless gas cylinder/accumulator shell

Activity categories:

- Production of pressure equipment (DNV GL-CP-0261)
- Manufacturing of pressed parts (DNV GL-CP-0350)
- Heat treatment (DNV GL-CP-0350)
- Non destructive testing

For non-destructive tests pertaining to pressure equipment class I and II, the procedure and requirements stipulated in specific class guidance DNVGL-CG-0051 & DNV GL Pt.4 Ch.7 Sec.7 [4] shall be applied.

Welding facilities are not available in manufacturing place, if required according to DNV GL ship rules Pt.4 Ch.7, then:

- welding to be performed at an approved welding workshop (as per DNV GL-CP-0351)

Surveyor may decide to visit the subcontractor as a part of Approval survey.

Approval documentation

Approval granted on the basis of the following submitted documentation:

- Type of gas cylinders being produced
- Description of forming process for pressed parts, including details related method and equipment used.
- Description of heat treatment, including furnace- and other process details.
- Description of non-destructive testing process, including method and equipment used.
- Manufacturer organization chart and list of main manufacturing equipment
- Quality assurance scheme, quality certification and approvals held.

Previous DNV Approval of Pressure Vessel Manufacturer Certificate no. *T-1643* and GL Approval of Material Manufacturers Certificate no. *WF 2215 HH 2*.

Application for initial approval of pressure equipment manufacturers (Form PEM 901) signed by DNV GL Surveyor dated 2018-02-16.

Checklist for initial approval of pressure equipment manufacturers (Form PEM 601) signed by DNV GL Surveyor dated 2018-02-19.

Scope of approval

Gas cylinders and pressure accumulators

Steel type	Grade ³⁾⁴⁾	Manufacturing method ¹⁾	Delivery condition ²⁾	Min. wall thickness [mm]
Alloy	34CrMo4 acc. to EN 10083-3	HF	QT	2

Remarks:

- 1) HF: hot forming
- 2) QT: quenched and tempered
- 3) Pre-material supplier: manufacturers approved by DNVGL for the applicable grades of semi-finished products
- 4) Incl. equivalent grades in acc. to other standards



Job Id: **263.11-004222-4**
Certificate No: **AMT0000086**

Certificate Retention Survey

The approval will be valid for three years. To maintain the approved status, the manufacturer must be re-inspected every three years. Application for renewal should be made not later than three months before the expiry date of the certificate.

Any alteration to the approved condition during the period of validity, e.g. method of manufacture, maximum dimensions or conditions of supply, is to be reported to the Society. A re-inspection and / or re-testing may be required when deemed necessary by the Society.