



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMT00000S2

This is to certify:

That the Manufacturer

Hydroll Oy
Lohkarekuja 6,
62100 LAPUA, Finland

is approved for the
Manufacturing of Seamless Gas Cylinders and Pressure Equipment Class I and II

The approval is granted on condition that

DNV class programme DNV-CP-0261 – Manufacture of pressure equipment
DNV class programme DNV-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 **Hamburg** on **2022-12-14**

for **DNV**

This Certificate is valid until **2025-12-13**.

DNV local unit: **Finland CMC**

Approval Engineer: **Frank Juckel**

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Olaf Drews
Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

This Certificate is subject to terms and conditions overleaf. Any significant change in production facilities and methods may render this Certificate invalid.



Approval basis

Product categories:

- pressure equipment of class I and II:
 - piston accumulators (screwed or crimped types)

Activity categories:

- production of pressure equipment (DNV-CP-0261)
- manufacturing of pressed parts and seamless gas cylinders (DNV-CP-0350)
- machining (partly subcontracted)
- non-destructive testing (NDT subcontracted)

Remark on NDT:

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

Remark on further activities:

The following facilities are not available in manufacturing place and if required according to DNV-RU-SHIP-Pt.4 Ch.7 then:

- Welding shall be performed at an approved welding workshop as per DNV-CP-0352.
 - Heat treatment to be performed at an approved heat treatment workshop as per DNV-CP-0351.
- Surveyor may decide to visit the subcontractor as part of AoM/approval survey.

Scope of approval

Seamless accumulator shells (piston accumulators)

Steel type	Grade ³⁾	Manufacturing method ¹⁾	Delivery condition ²⁾	Accumulator part	MIN.-Max. Int. diameter [mm] ⁴⁾
Carbon and Carbon-Manganese	E355+SR acc. to EN10305-1	CF	SR	Cylinder tube	100-200

Remarks:

- 1) CF: Cold finished followed by heat treatment
- 2) SR: Stress relieved
- 3) Pre-material supplier: Manufacturers approved by DNV for the applicable grades of semi-finished products. Material shall be according to Particular Material Appraisal (PMA).
- 4) Any further limitations in compliance with a valid DNV Case-by Case Plan Approval or DNV Type Approval TA.

Place of Production:

HYDROLL Oy
 Lohkarekuja 6,
 62100 LAPUA, Finland

Approval documentation

Checklists and supporting documents:

- Checklist initial approval of manufacturers (CP-0346, 20.101a), 2021-04-27
- Application for initial approval of pressure equipment manufacturer (CP-0261, PEM 901), 2021-04-22
- Checklist for initial approval of pressure equipment manufacturer (CP-0261, PEM 601), 2021-04-27 (submitted by email dated 2022-11-28, (correspondence no. 35)
- Documentation related to pressed parts (CP-350), latest 2022-11-04
- Email M-SA-MW 2022-11-25 regarding CP-350, (correspondence no. 34)

Certificate Retention Survey

The AoM certificate is valid for three years with no intermediate assessment unless otherwise requested by the Society. Application for renewal should be made not later than three months before the expiry date of the certificate.

Manufacturer shall invite the Society's surveyor for renewal survey in order to revisit the critical manufacturing steps and to verify that the approved conditions are maintained.

During the survey the manufacturer shall provide evidence that the applicable versions of relevant rules, standards and approval programs are applied, and that all requirements given therein are implemented.