

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No: **AMMM000028A**Revision No:

This is to certify:

That

Afflerbach Bödenpresserei GmbH & Co KG

Hauptstr. 2 56305 Puderbach, Germany

is an approved manufacturer of **Pressed Parts**

in accordance with

DNV rules for classification – Ships DNV rules for classification – Naval vessels

DNV class programme - DNV-CP-0350 Pressed parts and seamless gas cylinders

and the following particulars:

Application area Pressed parts

Steel type Carbon, carbon-manganese,

Alloy,

Austenitic stainless

Austenitic-ferritic (duplex) stainless

Non-magnetizable Steel

Manufacturing method Cold forming, hot forming

Max. thickness

Max. diameter

Heat treatment condition

Additional approval conditions

See page 2

See page 2

See page 2

See page 2

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at Hamburg on 2024-08-22

This Certificate is valid until 2027-07-31.

DNV local unit: Essen

Approval Engineer: Christian Wildhagen



for **DNV**

This document has been digitally signed and will therefore not have handwritten signature

Stefan Röhr

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.



Form code: AM 311 Revision: 2022-12 www.dnv.com Page 1 of 2



Job Id: **263.11-008756-3** Certificate No: **AMMM000028A**

Revision No: 2

Particulars of the approval

Pressed parts

Steel type / grade	Heat treatment condition 1)	Max. thickness [mm]	Max. diameter [mm]
NV A, NV B, NV D, NV E	N	35	6500
NV A32, NV A36, NV D32, NV D36, NV E32, NV E 36	N	35	6500
S235J0, S235J2, S235JR, S275J0, S275J2, S275JR S355J0, S355J2, S355JR, S355K2 acc. to EN 10025-2	N	35	6500
S690-QL1 acc. to EN 10025-6	QT	20	6500
P235GH, P265GH, P295GH, P355GH acc. to EN 10028-2	N	35	6500
16Mo3 acc. to EN 10028-2	N	35	6500
18MnMo4-5 acc. to EN 10028-2	NT, QT	35	6500
20MnMoNi4-5 acc. to EN 10028-2	QT	35	6500
10CrMo9-10, 12CrMo9-10, 13CrMo4-5, 13CrMoSi5-5, 12CrMoV12-10, 13CrMoV9-10 acc. to EN 10028-2	NT, QT	35	6500
X10CrMoVNb9-1, X12CrMo5 acc. to EN 10028-2	NT, QT	35	6500
P275NH, P275NL1, P275NL2, P355N, P355NH, P355NL1, P355NL2 acc. to EN 10028-3	N	35	6500
Gade 55, 60, 65, 70 acc. to ASME SA-516	N	35	6500
NV 0.5Ni	N	35	6500
NV 1.5Ni, NV 2.25Ni, NV 3.5Ni, NV 5Ni, NV 9Ni	N, NT, QT	35	6500
11MnNi5-3, 13MnNi6-3 acc. to EN 10028-4	N, NT	35	6500
15NiMn6, 12Ni14 acc. to EN 10028-4	N, NT, QT	35	6500
X12Ni5, X8Ni9 acc. to EN 10028-4	N, NT, QT	35	6500
X7Ni9 acc. to EN 10028-4	QT	35	6500
1.4301, 1.4307, 1.4401, 1,4404, 1.4541, 1.4571 acc. to EN 10028-7, 304, 304L, 316, 316L, 316 Ti, 321 acc. to SA-240	SHT	100	6500
1.4462 acc. to VdTÜV-WB 418	SHT	35	6500
1.3964 acc. to BWB WL 1.3964-1	SHT	35	6500

Remarks:

N: Normalised; QT: Quenched and tempered; NT: Normalised and tempered; SHT: Solution Heat Treated (solution annealing)

Additional approval conditions:

Welding is permitted according to approved procedure WPS 319 Rev.1 as well as other welding procedures approved by DNV.

Form code: AM 311 Revision: 2022-12 www.dnv.com Page 2 of 2