

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No: AMMM00002T3

This is to certify:

That

ILA-Langner GmbH & Co. KG Zum Rommelsberg 9 35713 Eschenburg-Eibelshausen, Germany

is an approved manufacturer of

**Pressed Parts** 

in accordance with

DNV GL rules for classification - Ships

and the following particulars:

Pressed parts (dished ends and manhole cover) **Application area** 

Steel type Carbon and carbon-manganese,

See page 2

Manufacturing method **Cold forming** 

Max. thickness 8 mm

**Heat treatment condition** See page 2 Additional approval conditions 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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at Hamburg on 2020-09-21

for **DNV GL** 

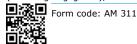
This Certificate is valid until 2023-09-20.

DNV GL local station: Essen

Approval Engineer: Christian Wildhagen

**Thorsten Lohmann Head of Section** 

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Job Id: 263.11-010775-1 Certificate No: AMMM00002T3

## Particulars of the approval

### Pressed parts (dished ends and manhole cover)

Steel type	Manufacturing method 1)	Max. thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	CF	8	AF

#### Remarks:

1) CF: cold forming
2) AF: as formed (see special conditions)

### Special conditions:

Acc. DNVGL-RU-Ship Pt.2 Ch.2 Sec.3 [5], for cold-formed dished ends made of steel grades with nominal yield strengths not exceeding 275 MPa, heat treatment is not required if all of the following conditions are fulfilled:

- the temperature of the charging media is −10°C or above,
- the design temperature TD  $\leq$  120°C and the nominal wall thickness t  $\leq$  8 mm

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