



Certificate no.:
AMMM00003EZ

MANUFACTURER APPROVAL IN PRINCIPLE

This is to certify:

that

DEEP Manufacturing Incorporated
Houston, TX, USA

has shown in principle the ability to manufacture
Additive Manufactured Metallic Materials

in accordance with

DNV rules for classification – Ships
DNV class programme – DNV-CP-0267 Approval of manufacturers – Additive Manufacturing
DNV class programme – DNV-CG-0197 Additive manufacturing - qualification and certification process
for materials and components
DNV class programme – DNV-CP-0346 Approval of manufacturer scheme

and the following particulars:

Manufacturing method:	Directed Energy Deposition (DED) arc
Application area:	Steel for pressure hulls and pressure vessels for human occupancy High strength steels for hull structure and equipment Boiler and pressure vessel steels
Material type:	NV F-AM-A-WAAM-NV510S-2 NV F-AM-SR-WAAM-NV510S-2 Corresponding Grade: NV510S-2
AM equipment type and manufacturer:	2 x single robotic arm (6 - axes) 1 x single robotic arm (6 - axes) and positioner (1 - axes) 1 x single robotic arm (6 - axes) and positioner (2 - axes)
Dimensional limitations:	Max.: Ø 1.900 mm, wall thickness 14 – 89 mm

For a full Manufacturer Approval Certificate further investigation and tests under the surveillance of DNV are required.

Issued at Hamburg on 2026-05-05

This Certificate is valid until 2027-05-04.
DNV local unit: AC Europe Materials & Welding

Approval Engineer: Norbert Worm



for DNV

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

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