



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000031Z

This is to certify:

That

Amazon Technocast Pvt. Ltd.

**Survey No.-269, Plot no.-1,2 & 3, B/h Maruti Petroleum, Rajkot-Gondal NH 8B, Village:
Shapar (Veraval), dist,- Rajkot- 360024, Gujarat, India**

is an approved manufacturer of
Steel Castings

in accordance with

**DNV rules for classification – Ships
DNV class programme – DNV-CP-0246 Steel castings**

and the following particulars:

Application area	Castings for hull structures and equipment, Castings for machinery, Castings for boilers, pressure vessels and piping systems, Ferritic steel castings for low temperature service, Stainless steel castings
Steel type	Carbon and carbon-manganese, Austenitic stainless, Ferritic-austenitic (Duplex) stainless,
Casting method	Investment casting,
Max. weight	80 kg
Max. wall thickness	59 mm
Heat treatment condition	Quenched and tempered, solution heat treated,
Additional approval conditions	See page 2

Manufacturer approved by this certificate is 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 **2023-06-02**

This Certificate is valid until **2026-06-01**.

DNV local unit: **India CMC MES**

Approval Engineer: **Shylate Mahachi**



for DNV

Digitally Signed By: Roehr, Stefan
Location: DNV Hamburg, Germany
Signing Date: 02.06.2023 , on behalf of

Thorsten Lohmann
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.



Form code: AM 311

Revision: 2022-12

www.dnv.com

Page 1 of 3

Particulars of the approval

Castings for hull structure and equipment

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	NV C400UW, NV C440UW, NV C480UW	IC	80	59	QT

Castings for machinery

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	NV C400U, NV C440U, NV C480U	IC	80	59	QT

Castings for boilers, pressure vessels and piping systems

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	NV C450H, NV C490H	IC	80	59	QT

Ferritic steel castings for low temperature service

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	C450L, C490L	IC	80	59	QT

Stainless steel castings

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
Austenitic	GX 2 CrNi 18 10 (304L) GX 5 CrNi 19 9 (304) GX 2 CrNiMo 19 11 2 (316L) GX 5 CrNiMo 19 11 2 (316)	IC	80	59	SHT
Ferritic-austenitic	GX 2 CrNiMoN 22 5 3 GX 2 CrNiMoCuN 25 6 3 3	IC	80	59	SHT

Remarks:

- 1) IC: Investment Casting
- 2) SHT: Solution Heat Treated (Solution Annealing)
QT: Quenched and tempered
- 3) Incl. equivalent grades in acc. to other standards
- 4) Possible application and certification of any material to classed object is subject to case by case approval
- 5) For low temperature service, tests were done at -46°C.

Special conditions:

- Repair welding is permitted in accordance with approved procedure:
- WPS/NORSOK/5A/04 dated 2017-12-07 and
WPS/SS/AMAZON/02 dated 2017-02-01
WPS/CS/AMAZON-01 dated 2017-01-30
as well as in accordance with other welding procedures approved by DNV.
The requirements for repair welding as stated in DNV-RU-SHIP Pt.2 Ch.2 Section 8 shall be complied with.