

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

PTC Industries Limited.
Advanced Manufacturing and Technology Center (AMTC)
NH-25A, Sarai Sahjadi,
Lucknow - 227101, Uttar Pradesh,
India

is an approved manufacturer of
Steel Castings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Castings for hull structures and equipment Casting for machinery Stainless steel castings
Steel type(s)	Carbon and carbon-manganese, Austenitic stainless, Austenitic-ferritic (Duplex) stainless, see page 2
Casting method	Investment casting
Max. weight	2 000 kg
Heat treatment condition	Normalized, quenched and tempered, solution heat treated, see page 2
Remarks	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 **2018-02-21**

for **DNV GL**

This Certificate is valid until **2020-12-31**.

DNV GL local station: **Mumbai**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section



Job Id: **263.11-008501-1**
Certificate No: **AMMM00001Z0**

Particulars of the approval

Castings for hull structure and equipment

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
C and C-Mn	VL C400UW, VL C440UW, VL C480UW	IC	2 000	N, QT

Castings for machinery

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U	IC	2 000	N, QT

Stainless steel castings

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
Austenitic	GX 2 CrNi 18 10 (304L)	IC	2 000	SHT
	GX 5 CrNi 19 9 (304)			
	GX 6 CrNiNb 19 10 (347)			
	GX 2 CrNiMo 19 11 2 (316L)			
	GX 5 CrNiMo 19 11 2 (316)			
	GX 5 CrNiMo 19 11 3 (317)			
22 Cr Duplex	UNS S31803	IC	2 000	SHT
25 Cr Duplex	UNS S32750	IC	2 000	SHT

Remarks:

- 1) IC: Investment Casting
- 2) SHT: Solution Heat Treated (Solution Annealing)
N: Normalised
QT: Quenched and tempered
- 3) Incl. equivalent grades in acc. to other standards

Special conditions:

Including austenitic steel for approved low-temperature applications