**DNV-GL** 

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No: **AMMM0000213** 

This is to certify:

That

## Veeyes Alloys Private Limited Coimbatore, Tamil Nadu, India

is an approved manufacturer of Steel Castings

in accordance with

DNV GL rules for classification - Ships

and the following particulars:

Steel type(s) Casting for machinery

Castings for boilers, pressure vessels and piping systems

Stainless steel castings

Steel type(s) Carbon, Carbon-Manganese,

Alloy,

**Austenitic Stainless** 

Max. weight See page 2
Max. wall thickness See page 2
Heat treatment 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 2018-04-11

for **DNV GL** 

This Certificate is valid until **2021-04-30**.

DNV GL local station: Mumbai

Approval Engineer: Stefan Röhr Thorsten Lohmann

Head of Section



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### Particulars of the approval

#### Castings for hull structure and equipment

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition <sup>2)</sup>
C and C-Mn	VL C400UW, VL C440UW, VL C480UW, VL C520UW, VL C560UW, VL C600UW	SC	2 000	120	N, NT
Alloy	C550AW, C620AW	SC	2 000	120	NT 5)

#### **Castings for machinery**

Steel type	Grade <sup>3) 4)</sup>	Casting method 1)	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition <sup>2)</sup>
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U	SC	2 000	120	N, NT
Alloy	C550A, C600A, VL C690A	SC	2 000	120	NT 5)

#### Castings for boilers, pressure vessels and piping systems

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition <sup>2)</sup>
Carbon, Carbon- manganese	VL C450H	SC	2 000	120	N, NT
	VL C490H	SC	2 000	120	N, NT
Alloy	VL C0.5Mo	SC	2 000	120	NT
	VL C1Cr0.5Mo	SC	2 000	120	NT
	VL C2.25Cr1Mo	SC	2 000	120	NT

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#### Stainless steel castings

Steel type	Grade <sup>3) 4)</sup>	Casting method 1)	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition <sup>2)</sup>
Austenitic	GX 2 CrNi 18 10 (304L)	- - SC	2 000	80	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)				

#### Remarks:

- SC: Sand Casting
- N: Normalised; NT: Normalised and tempered; SHT: Solution Heat Treated (Solution Annealing)
- Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules Incl. equivalent grades acc. to other standards
- Alloy steel castings shall be quenched and tempered at a temperature of not less than 550°C. Alternatively, they may be supplied in the normalized and tempered condition, in which case the specified mechanical properties shall be agreed with the Society.

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