

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM000001C**  
Revision No:  
**3**

**This is to certify:**

**That**

**Acierie et Fonderie de la Haute Sambre  
BERLAIMONT, France**

is an approved manufacturer of  
**Steel Castings**

in accordance with  
**DNV GL rules for classification – Ships  
DNVGL-OS-B101 – Metallic materials**

and the following particulars:

<b>Application area</b>	<b>Castings for hull structures and equipment Castings for machinery Castings for boilers, pressure vessels and piping systems Stainless steel castings</b>
<b>Steel/Material type(s)</b>	<b>Carbon and carbon-manganese, Alloy, Nickel base alloy Austenitic stainless Austenitic-ferritic (Duplex) stainless</b>
<b>Casting method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>See page 2 ff.</b>
<b>Heat treatment condition</b>	<b>See page 2 ff.</b>

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 **2019-08-14**

for **DNV GL**

This Certificate is valid until **2022-06-30**.

DNV GL local station: **Dunkirk**

Approval Engineer: **Stefan Röhr**

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**Thorsten Lohmann  
Head of Section**



Job Id: **263.11-008367-2**  
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## Particulars of the approval

### Castings for hull structure and equipment

Steel type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL C400UW, VL C440UW, VL C480UW, VL C520UW, VL C560UW, VL C600UW	SC	3 500	N, NT, QT
Alloy	C550AW, C620AW	SC	3 500	NT, QT

### Castings for machinery

Steel type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U	SC	3 500	N, NT, QT
Alloy	C550A, C600A, VL C690A	SC	3 500	NT, QT

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

Steel type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL C450H, VL C490H	SC	3 500	N, NT, QT
Alloy	VL C0.5Mo, VL C1Cr0.5Mo, VL C2.25Cr1Mo	SC	3 500	N, NT, QT

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**Nickel base alloys**

Steel type / grade	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
ASTM A494 CW6MC	SC	3 500	SHT

**Stainless steel castings**

Steel type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
Austenitic	GX 2 CrNi 18 10 (304L)	SC	3 500	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)			
Austenitic-ferritic	GX 2 CrNiMoN 22 5 3	SC	3 500	SHT
Austenitic-ferritic	GX 2 CrNiMoCuN 25 6 3 3	SC	3 500	SHT
Austenitic-ferritic	GX 2 CrNiMoN 26 7 4	SC	3 500	SHT

Remarks:

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