

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
Österby Gjuteri AB
Österbybruk, Uppsala Län, Sweden

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 Castings for machinery Castings for propellers Stainless steel castings
Steel type(s)	Carbon and carbon-manganese, Alloy, Martensitic stainless, Austenitic stainless, Austenitic-ferritic (Duplex) stainless,
Casting method	See page 2
Max. weight	See page 2
Heat treatment condition	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 **2018-06-30**

for **DNV GL**

This Certificate is valid until **2021-06-29**.

DNV GL local station: **Stockholm**

Approval Engineer: **Andreas Koch**

Thorsten Lohmann
Head of Section



Particulars of the approval

Castings for hull structure and equipment
Castings for machinery
Castings for propellers
Stainless steel castings

Steel type	Grade ³⁾⁴⁾	Casting method ¹⁾	Max. weight [kg]	Delivery condition ²⁾		
C and C-Mn	VL C400UW, VL C440UW, VL C480UW	SC	7 000	N, NT, QT		
	VL C400U, VL C440U, VL C480U, VL C520U					
Alloy	VL C550AW, VL C620AW	SC		7 000	QT	
	VL C550A, VL C600A, VL C690A					
Austenitic	GX 2 CrNi 18 10 (304L) 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)	SC			7 000	SHT
22 Cr Duplex	GX 2 CrNiMoN 22 5 3	SC	7 000			SHT
25 Cr Duplex	GX 2 CrNiMoCuN 25 6 3 3	SC				SHT

Remarks:

- 1) SC: Sand Casting
- 2) SHT: Solution Heat Treated (Solution Annealing)
 N: Normalised
 QT: Quenched and tempered
 NT: Normalised and tempered
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Incl. equivalent grades in acc. to other standards