

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No: **AMMM00001ZD**Revision No:

This is to certify:

That

Anadolu Dokum Sanayi A.S. Hürriyet Bulvari No.47,Körfez, Kocaeli, Türkiye

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,

Casting for machinery, Stainless steel castings

Steel type(s) Carbon and carbon-manganese,

Alloy,

Austenitic stainless,

Austenitic-ferritic (Duplex) stainless,

Martensitic stainless

Casting method Sand casting

Max. weight See particulars of the approval Heat treatment condition See particulars of the approval

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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at Hamburg on 2024-02-19

This Certificate is valid until 2024-07-01.

DNV local unit: Istanbul

Approval Engineer: Christian Wildhagen



for **DNV**

This document has been digitally signed and will therefore not have handwritten signature

Stefan Röhr

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.



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Particulars of the approval

Castings for hull structure and equipment

Steel type	Grade 4)	Casting method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	NV C400UW, NV C440UW, NV C480UW, NV C520UW	sc	25 000	700	N

Castings for machinery

Steel type	Grade ⁴⁾	Casting method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	NV C400U, NV C440U, NV C480U, NV C520U	sc	25 000	700	N

Stainless steel castings

Steel type	Grade ⁴⁾	Casting method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
Austenitic	GX 2 CrNiMo 19 11 2 (316L)			400	SHT
	GX 5 CrNiMo 19 11 2 (316)				
Martensitic	1.4008, 1.4011, 1.4317, 1.4405, 1.4411, 1.4525 acc. to EN 10283 ³⁾	sc	4 200	500	QT
25 Cr Duplex	GX 2 CrNiMoN 25-6-3 (1.4468)			350	SHT

Steel castings acc. other standards 3)

Steel type	Casting method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition 2)	
Steel acc. to EN 10293					
G26CrMo4 (1.7221)	sc	4 000	500	QT	
Steel acc. to EN 10340					
G18NiMoCr3-6 (1.6759)	sc	4 000	500	QT	
Steel acc. to SEW 520					
G22NiMoCr5-6 (1.6760)	sc	4 000	500	QT	

Remarks:

1) SC: Sand Casting

²⁾ SHT: Solution Heat Treated (Solution Annealing)

N: Normalised

QT: Quenched and tempered

3) Possible application and certification of any material to classed object is subject to case by case approval

4) Incl. equivalent grades in acc. to other standards

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