



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002M9
Revision No:
1

This is to certify:

That

GUIVISA, S.L.
Cervantes 47, E-48970, Basauri, Bizkaia, Spain

is an approved manufacturer of
Steel Castings

in accordance with

DNV-OS-E304 – Offshore mooring steel wire ropes, Edition July 2020 (Amended August 2021)

and the following particulars:

Product	Castings for offshore mooring wire rope sockets
Grade	ASTM A487 – Gr. 10Q, see page 2
Max. weight	812 kg
Max. thickness	140 mm
Delivery Condition	Normalised, Quenched and Tempered
Remarks	See particulars of approval

Manufacturer approved by this certificate is 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 **Høvik** on **2022-07-11**

for **DNV**

This Certificate is valid until **2025-06-30**.

DNV local station: **Area NB/CMC Iberia**

Approval Engineer: **Shylate Mahachi**

Sondre Løken
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.



Form code: AM 311

Revision: 2021-03

www.dnv.com

Page 1 of 2

Particulars of the approval

Particular of approvals for castings for offshore mooring wire rope sockets				
Grade ¹⁾	Delivery condition ²⁾	Max. diameter or thickness [mm]	Max. weight [kg]	Casting method
ASTM487-10Q	NQT	140	812	Sand casting

Remarks:

¹⁾ For approved material specification see table S1

²⁾ NQT: Normalised, Quenched and Tempered

³⁾ Heat treatment is carried out at subcontractor: TRATAMIENTOS TERMICOS YURRE S.L.

Table S1 - Specification for chemical composition															
Grade		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	V	Ti	Nb	N
ASTM487-10Q	Min	.25	.30	.60	-	-	.55	1.40	.20	-	.020	-	-	-	-
	Max	.30	.60	1.0	.020	.015	.90	2.00	.40	.20	.035	.03	.002	.01	.012

Remarks:

The content of Sn, Sb, As and B may be required to be determined. In such cases, the maximum content shall be 0.02 % for Sn, 0.01% for Sb, 0.01% for As and 0.001% for B.