

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMM-7364
File No:
SC
Job Id:
263.11-004970-1

This is to certify:

That

GUIVISA, S.L.
Basauri, Bizkaia, Spain

is an approved manufacturer of
Steel Castings

in accordance with
DNV-OS-E304 Offshore Steel Wire Ropes

and the following particulars:

Product	Castings for offshore mooring wire rope sockets
Grade	ASTM A487 - Gr 10Q, see page 2
Max. weight	310 Kg
Max. thickness	140 mm
Delivery condition	Normalised, Quenched and Tempered

Høvik, 2015-03-31
for **DNV GL**

Hanne Anita Hjerpetjønn
for **Hanne Anita Hjerpetjønn**
Head of Section



DNV GL local office:
Bilbao

This Certificate is valid until
2019-06-30

Gorka Lozano
Gorka Lozano
Surveyor

Certificate No: **AMM-7364**
 File No: **SC**
 Job Id: **263.11-004970-1**

Particulars of approval:

Particular of approvals for castings for offshore mooring wire rope sockets				
Grade¹⁾	Delivery conditions²⁾	Max. diameter or thickness (mm)	Max. weight (Kg)	Casting method
ASTM487-10Q	NQT	140	310	Sand casting

Remarks:

¹⁾ For approved material specification see table S1

²⁾ NQT: Normalized, Quenched and Tempered

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	1.00	.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.