



Certificate no.:
TAD00001NR

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Hoisting, Rotation and Pipehandling Equipment

with type designation(s)
Sheaves

issued to
GOSAN, S.A.
Ortuella, 48, Spain

is found to comply with
DNV-OS-E101 – Drilling facilities, Edition July 2024

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2024-08-28**

This Certificate is valid until **2029-08-27**.

for **DNV**

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

Approval Engineer: **Andreas Sigvardsson**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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.



Product description

6 models of 72" wire sheaves

Codes/standards used a reference

API Spec 8C, "Drilling and Production Hoisting Equipment", 5th edition
F.E.M. 1.001, "Rules for the Design of Hoisting Appliances", 1998

Application/Limitation

Parameter	Value
Sheave G6-03456:	
Max. Line Pull	842 kN
Max. wrap angle	90°
Max. fleet angle	1.5° outlet / 0° inlet
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)
Sheave G6-03443:	
Max. line Pull	842 kN
Max. wrap angle	180°
Max. fleet angle	1.5°
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)
Sheave G6-03121:	
Max. line Pull	842 kN
Max. wrap angle	180°
Max. fleet angle	1.5°
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)
Sheave G6-03119:	
Max. line Pull	842 kN
Max. wrap angle	90°
Max. fleet angle	1.5° outlet / 0° inlet
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)
Sheave G6-03118:	
Max. line Pull	842 kN
Max. wrap angle	180°
Max. fleet angle	1.5°
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)
Sheave G6-03120:	
Max. line Pull	842 kN
Max. wrap angle	180°
Max. fleet angle	1.5°
Min. design temperature	-20°C
API Spec 8C PSL	PSL 1 and PSL 2
F.E.M. classification	E8 (B10; P1)

Type Approval documentation

Drawing number	Revision	Title

Document number	Revision	Title

Limitations

1. All materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the Type Approval documentation.
2. NDT as specified in the Type Approval Documentation are to be carried out by certified personnel.
3. Qualification of welding procedures and qualification of welders to be in accordance with Ch.2, Sec.8 in DNV-OS-E101.
4. The sheave bearings are not covered by this Type Approval.
5. Sheave bearings are to be delivered with manufacturer's CoC, confirming sufficient strength and capacity. Proper lubrication of the bearings is to be guaranteed during operation and use of the sheaves.
6. PSL 2 sheaves shall comply with the additional fabrication requirements in API Spec 8C, ref Table 2 regarding ductility requirements, section 6.5 and 6.6 for material specifications, section 7 for welding requirements, Table 5 for NDT acceptance criteria and section 8 for general NDT requirements.

Testing to be carried out on each individual sheave

Functional tests shall be conducted in accordance with DNV-OS-E101 Ch.2 Sec.8 §3.5.
Testing shall be witnessed by DNV representative.

Marking of product

Each sheave shall be marked according to API Spec.8C Sec.9.2.6.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>.

END OF CERTIFICATE