



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAS00001EK
Revision No:
5

This is to certify:
that the Lifting Gear

with type designation(s)
Spreader beams type OX-SB

issued to
OX & RUD LIFTING SOLUTIONS, S.L.U.
Sant Boi de Llobregat, Barcelona, Spain

is found to comply with
DNV standard DNV-ST-0378 – Offshore and platform lifting appliances
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances

Application:
Offshore, platform and shipboard cranes

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

Issued at **Høvik** on **2024-02-28**

for **DNV**

This Certificate is valid until **2029-02-27**.
DNV local unit: **Area NB/CMC Iberia**

Approval Engineer: **Thomas Henrik Tranesen**

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

Spreader beams with the following designation:

OX-SB-09
 OX-SB-17
 OX-SB-24
 OX-SB-34
 OX-SB-50
 OX-SB-70
 OX-SB-70-110
 OX-SB-110
 OX-SB-110-170
 OX-SB-170
 OX-SB-170-250
 OX-SB-250
 OX-SB-250-400
 OX-SB-400
 OX-SB-400-600
 OX-SB-600
 OX-SB-800
 OX-SB-1350

The safe working loads for each spreader beam/configuration to be in accordance with the stamped report: "Table load vs span OX-SB" and "Load vs Span SB STD + SB-70-110".

Dynamic amplification factor (DAF) in accordance with DNV-ST-0378 Clause 8.2.2.1.

Design temperature -20°C

Application/Limitation

1. The spreader beams are manufactured by the following companies:
 - o Cargoflet Blasant S.L. (holder of the certificate); Sant Boi de Llobregat, Barcelona (Spain)
 - o Tremetal; Camí dels Sagraments, 15, Pol. Ind. Sant Ermengol II, 08630 Abrera, Barcelona (Spain)
 - o Montajes Gomur; Polígono industrial de Cros, S, puerta 17, 39600 Maliaño, Cantabria (Spain)
1. All materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the DNV-ST-0378 Sec.3.
2. Welds and NDT to be carried out by certified personnel and in accordance to DNV-ST-0378 Sec.3.
3. It is the responsibility of the Holder of the Certificate to ensure that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

Type Approval documentation

Following drawings are stamped as "Type Approved":

Drawing no.	Rev.	Title
80220009 S	0	Sections
80220009 E	0	End unit
80220009 D	0	Descendent unit
80220017 S	0	Sections
80220017 E	0	End unit
80220017 D	0	Descendent unit
80220024 S	0	Sections
80220024 E	0	End unit
80220024 D	0	Descendent unit
80220034 S	0	Sections
80220034 D	0	Drop link
80220034 E	0	End unit
80220050 S	0	Sections
80220050 E	0	End unit
80220050 D	0	Drop link
80220070 S	0	Sections
80220070 E	0	End unit

80220070 D	0	Drop link
80220070110	0	End unit
80220110 S	0	Sections
80220110 E	0	End unit
80220110 D	0	Drop link
80220170 S	0	Sections
80220170 E	0	End unit
80220170 D	0	Drop link
8022110170 E	0	End unit
8022170250 E	0	End unit
80220250 D	0	Drop link
80220250 S	0	Sections
80220250 E	0	End unit
8022250400 E	0	End unit
80220400 D	0	Drop link
80220400 S	0	Sections
80220400 E	0	End unit
8022400600 E	0	End unit
80220600 D	0	Drop link
80220800 S	0	Sections
80220800 E	0	End unit
80220800 D	0	Drop link
80221350 S	0	Sections
80221350 E	0	End unit
80221350 D	0	Drop link

Following documentation is stamped "For Information":

<u>Document no.</u>	<u>Rev.</u>	<u>Title</u>
-	22.03.2018	Table load vs span OX-SB (*)
-	27.02.2024	Table load vs span OX SB 70-110 V2
-	-	Technical data sheet OX-SB-70/110
OXSB009-001	0	Assembly
017-001	0	OX SB 017- 001
024-001	0	Assembly
OXSB034-001	0	Assembly
80220034 E	0	End unit
050-001	0	Assembly
070-001-S	0	Assembly
OXSB110-001	0	Assembly
170-001	0	Assembly
OXSB110-170-001	0	Assembly
170-250-001	0	Assembly
250-001-V3	0	Assembly
250-400-001	0	Assembly
400-001	0	Assembly
400-600-001	0	Assembly
OXSB800-001	0	Assembly
1350-001	0	Assembly
-	0	Calculations OX-SB
-	0	Weld details

Tests carried out

Prototype tests carried out for spreader beams SWL = 70 tonnes and 170 tonnes the 14th of August 2018 and witnessed by DNV Sandefjord.

In order to obtain a CG3 certificate, each spreader beam shall be tested according to the DNV-ST-0378 Table 14-2 and NDT to be carried out according to DNV-ST-0378 Sec.3.



Job ID: **262.1-028237-4**
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Marking of product

Each spreader beam is to be marked according to DNV-ST-0378 Sec.14.5.

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.

END OF CERTIFICATE