DNV·GL

Certificate No:
TAS00001YM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Lifting set for Offshore containers and Portable Offshore Units

with type designation(s)
Wire Rope Slings for Offshore Containers or Portable Offshore Units

Issued to
Proofload Pty Ltd
Malaga, WA, Australia

is found to comply with
DNV GL standard DNVGL-ST-E271 – 2.7-1 Offshore containers, August 2017
DNV GL standard DNVGL-ST-E273 – 2.7-3 Portable offshore units, December 2016
EN 13414-1 Wire rope slings
ISO 10855-2:2018 Offshore containers and associated liftings sets – Part 2: Design, manufacture and testing of lifting sets
IMO/MSC Circular 860

Application :

1-, 2-, 3- & 4-Part Lifting Sets, with Forerunner where fitted for Lifting of Offshore Containers with Maximum Gross Mass 0 - 25.000 kg or Portable Offshore Units

Issued at **Aberdeen** on **2019-03-20**
This Certificate is valid until **2024-03-19**.
DNV GL local station: **Perth**

Approval Engineer: **Ronald Quiballo**

for **DNV GL**

Alex Doig
Team Lead

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.

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Job Id: **262.1-017941-2**
Certificate No: **TAS00001YM**

Manufactured By

Proofload Pty Ltd
Balcatta WA, Australia

Product description

This type approval is a renewal of S-8398.

The Type Approval Certificate covers wire rope sizes from 18mm to 52mm made with turn back method, assembled by Proofload Pty Ltd, according to DNVGL-ST-E271 "2.7-1 Offshore Containers" (DNV GL 2.7-1) or DNVGL-ST-E273 "2.7-3 Portable Offshore Units" (DNV GL 2.7-3).

The wire rope slings assembled by Proofload Pty Ltd to typically consist of components from the following sub suppliers:

Component	**Sub supplier** *(DNV GL to be informed and review new sub suppliers)*	**DNV GL TA Cert. number**
Master link & Quad assembly	- Gunnebo Industrier AB - Scaw South Africa P/L	TAS00000TE TAS000013Z
Wire rope [1)]	- USHA Martin Limited	NA
Shackles	- Van Beest B.V. - Gunnebo Anja Industrier AS	TAS000011V TAS00001B8
Ferrules [2)]	- Wirop	NA
Thimbles [3)]	- Wirop	NA

1) Wire ropes used in fore runner and bottom legs of lifting slings shall be 6x19 or 6x36 steel cored, with wire rope grades 1770 N/mm^2 and 1960 N/mm^2 in accordance with AS 3569, or equivalent.
2) Shackles are only considered part of sling if captive (i.e. can not be removed after assembly of sling).
3) Aluminium Ferrules / sleeves: According to EN 13411-3, or equivalent
4) Thimbles: Federal Specification EN 13411-1, or equivalent.

Components should be delivered with the following certificates:

- Master Links, Quad assemblies and Shackles:	Certificates based on DNV GL Type Approval.
- Wire Ropes:	To be supplied with traceable product certificates according to EN 10204, inspection certificate, type 3.1.
- Thimbles and ferrules:	To be supplied with a material certificate to EN 10204, test report, type 2.2.

Application/Limitation

For each delivered drum of wire rope, a test leg with one eye in each end to be prepared and tested to breaking. A reference should be made to the wire drum test report in each sling set certificate where that wire is used.

All production testing to be according to Proofload Pty Ltd procedure Q-PR-0012 "Selection of wire rope & components under DNV2.7.1 & ASEN12079" and to be agreed with local DNV GL office.

The manufacturer shall issue product certificates according to Sec. 8.5 in DNV GL 2.7-1, using the certificate form No. T-FR-0041 Rev.0. This certificate form is only to be used for slings certified according to this Type Approval Certificate.

For slings manufactured according to DNV GL 2.7-1 Offshore Containers
Lifting sets shall be assembled according to the strength requirements for lifting sets on Offshore Containers as described in DNV GL 2.7-1 Offshore Containers, Chapter 8. The angle of the sling legs

from vertical should be taken into account when choosing slings. This angle should normally be 45°, but smaller angles can be used.

Special slings, assembled according to the principles described in DNV GL 2.7-1 Offshore Containers, Chapter 8 and Appendix E, are also covered by this Type Approval. However, if unsymmetrical slings are to be assembled, local DNV GL office are to be contacted for reviewing in each case, unless otherwise is agreed with local DNV GL office.

> *Note: The sling leg is not necessarily the weakest part of the lifting set. Master link assemblies selected for slings with legs at 45° may not be suitable for slings with a smaller angle.*

The WLL to be used in certificates and marked on lifting sets shall be the maximum rating of an offshore container on which the sling can be used, at the given sling leg angle.

For slings manufactured according to DNV GL 2.7-3 Portable Offshore Units
Prior to selection of sling set the minimum required working load limit (WLL) shall be decided according to the strength requirements for lifting sets on portable offshore units as given in DNV GL 2.7-3, Sec. 7.3.2 and must be approved by DNV GL. Resulting sling force (RSF) can be found in the Design Verification Report (DVR) issued by DNV GL for the Portable Offshore Unit. The DVR shall be available for the sling manufacturer.

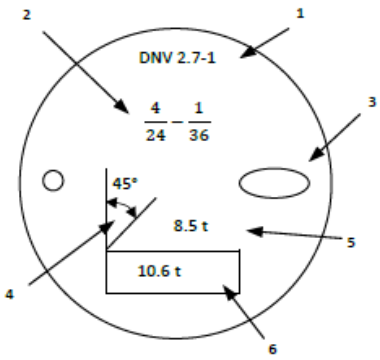
Type Approval documentation

Tests carried out

Prototype test to Breaking Load of assembled wire sling leg.

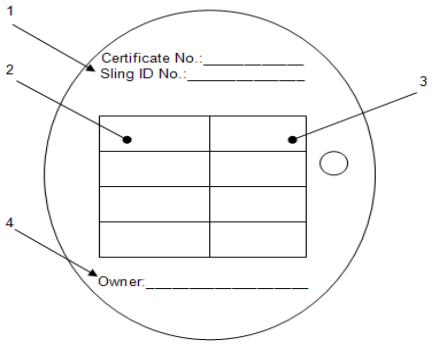
Marking of product

For slings manufactured according to DNV GL 2.7-1 Offshore Containers
Slings are to be marked with certification tag according to DNV 2.7-1 Offshore Containers, Chapter 8, as shown below:



Example of identification tag for a wire rope sling – Front

1) Reference to DNV GL 2.7-1
2) 4 legs of 24 mm, 1 forerunner of 36 mm (example)
3) Manufacturer's mark
4) Sling angle
5) Shackle size
6) WLL



Example of identification tag for a wire rope sling – Back

1) Certificate number (and unique identification number if applicable)
2) Column 1: inspectors mark, inspection suffix and date of periodic inspections (shall be of format YY-MM-DD)
3) Column 2: shackle ID number
4) The owner's name may optionally be included

For slings manufactured according to DNV GL 2.7-3 Portable Offshore Units
Each item to be marked according to DNV GL 2.7-3, Chapter 7.6.

Periodical assessment

In order to maintain the validity of the type approval, certificate retention surveys are to be carried out according to DNV GL 2.7-1. Intervals are not to exceed 6 months.
END OF CERTIFICATE