

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

**Scaw Metals Group
Cape Town, South Africa**

is found to comply with

DNV GL standard DNVGL-ST-E271 – 2.7-1 Offshore containers, August 2017**ISO 10855-2:2018 Offshore containers and associated liftings sets – Part 2: Design,
manufacture and testing of lifting sets****EN 13414-1 Wire rope slings****IMO/MSC Circular 860****DNV GL standard DNVGL-ST-E273 – 2.7-3 Portable offshore units, December 2016****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 **2019-03-26**This Certificate is valid until **2024-03-25**.for **DNV GL**DNV GL local station: **Cape Town**Approval Engineer: **Ronald Quiballo**

**Alex Doig
Head of Section**

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.



Product description

This certificate is a renewal of Type Approval Certificate S-8542, issued 2014-11-28.

The Type Approval Certificate covers wire rope slings from 18mm to 56mm assembled with turn-back eye by Scaw Metals Group, according to DNVGL-ST-E271 Offshore Containers (DNV GL 2.7-1) or DNVGL-ST-E273 Portable Offshore Units (DNV GL 2.7-3).

The wire rope slings assembled by Scaw Metals Group 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	- Crosby Group, Inc. - Scaw South Africa (Pty) Ltd.	TAS000001V ⁵⁾ TAS000013Z
Wire rope ¹⁾	- Usha Martin Ltd. - Haggie	NA
Shackles	- Van Beest B.V. - Crosby Group, Inc.	TAS000011V S-8357 ⁵⁾
Ferrules ²⁾	- Sahm Splicing - Crosby Group Inc.	NA (Aluminium)
Thimbles ³⁾	- Goods Metals Corporation - Crosby Group Inc.	NA

1) Wire ropes used in fore runner and bottom legs of lifting slings shall be 6-stranded and of type 6x36 and may be fibre cored or steel cored, with wire rope grades 1960 N/mm², in accordance to EN12385 or equivalent.

2) Shackles are only considered part of sling if captive (i.e. can not be removed after assembly of sling).

3) Ferrules/sleeves: According to EN 13411-3 or equivalent.

4) Thimbles: According to EN 13411-1 or equivalent.

5) Validity and extent of this type approval is covered by the extension letter issued by DNV GL.

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 reel 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.

The manufacturer shall issue product certificates according to Sec. 8.5 in DNV GL 2.7-1, using the certificate form No. QA004 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, Sec. 8 and Scaw Metals Group procedure QA004. 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.

Job Id: **262.1-018019-3**
Certificate No: **TAS00001ZF**

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

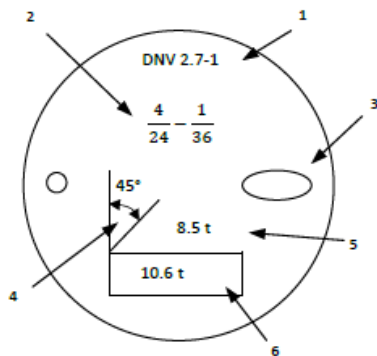
Tests carried out

Prototype test to Breaking Load of assembled wire sling leg.

Marking of product

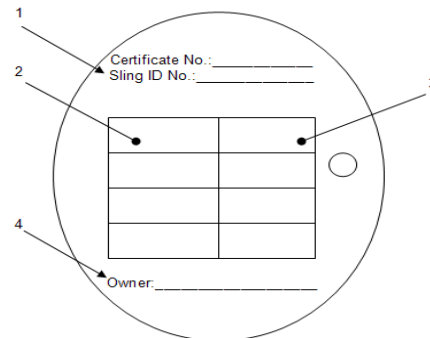
For slings manufactured according to DNV GL 2.7-1 Offshore Containers

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