

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Lifting set for Offshore containers and Portable Offshore Units**with type designation(s)  
**Wire Rope Lifting Sets**

Issued to

**Hendrik Veder Group UK Ltd  
Aberdeen, United Kingdom**

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  
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****Application :****1, 2, 3 and 4 leg lifting sets, with forerunner where fitted, for lifting of:  
- Offshore Container, with Maximum Gross Mass 0 to 25,000 kg,  
- Portable Offshore Units**Issued at **Aberdeen** on **2019-10-29**This Certificate is valid until **2024-10-28**.DNV GL local station: **Aberdeen**for **DNV GL**Approval Engineer: **Ronald Quiballo**

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**Elisabeth Legg  
Principal Engineer**

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.



Job Id: **262.1-032503-1**  
Certificate No: **TAS000029C**

## Manufactured by

DNV GL CIM No.: 10587623

DNV GL CIM No.: 155811

## Responsibility

Hendrik Veder Group UK Ltd. takes responsibility that both design and production are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

## Product description

This Type Approval Certificate replaces TAS000002T.

The Type Approval Certificate covers wire rope lifting sets assembled by Hendrik Veder Group UK Ltd and Universal Inspection UK Ltd, in accordance with DNVGL-ST-E271 or DNVGL-ST-E273.

The wire rope lifting sets assembled by Hendrik Veder Group UK Ltd and Universal Inspection UK Ltd consist of components from the following sub suppliers:

Component	Sub supplier (DNV GL to be informed and review new sub suppliers)	DNV GL TAC number
Master link & quad assembly	Scaw South Africa (Pty) Limited Gunnebo Industrier AB Crosby Group LLC Kjættingfabriken AS Yoke Industrial Corp.	TAS000013Z TAS00000TE TAS000001V <sup>5)</sup> TAS0000047 TAS000005Z
Wire rope <sup>1)</sup>	Hendrik Veder Group BV Ropenhagen Usha Martin Ltd	N/A
Shackles <sup>2)</sup>	Yoke Industrial Corp. Van Beest BV Crosby Group LLC Gunnebo-Anja Industrier AS	TAS0000241 TAS000011V TAS00000HA TAS00001B8
Ferrules <sup>3)</sup>	Talurit Sahm Splice Ltd Crosby Group LLC	N/A
Thimbles <sup>4)</sup>	Talurit George Taylor Sahm Splice Ltd Crosby Group LLC	N/A

<sup>1)</sup> Wire ropes used in forerunner and bottom legs of lifting sets shall be 6 stranded and of type 6x19 or 6x36 and may be fibre cored or steel cored, with wire rope grades 1770 N/mm<sup>2</sup> or 1960 N/mm<sup>2</sup>, in accordance with EN 12385, or equivalent.

<sup>2)</sup> Shackles are only considered part of the lifting set if captive (i.e. they cannot be removed after assembly of lifting set).

<sup>3)</sup> Ferrules/sleeves shall be in accordance with EN 13411-3, or equivalent.

<sup>4)</sup> Thimbles shall be in accordance with EN 13411-1, or equivalent.

<sup>5)</sup> At the time of publication, the referenced type approval is in the process of being renewed.

Components shall 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 material certificates in accordance with EN 10204, inspection certificate, type 3.1.
- Thimbles and ferrules: To be supplied with a material certificate in accordance with EN 10204, test report, type 2.2.

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## **Application/Limitation**

For each delivered drum of wire rope, a test leg with one eye in each end shall 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 should be done in accordance with Hendrik Veder Group UK Ltd procedures, to be agreed with the local DNV GL office.

The manufacturers shall issue product certificates in accordance with DNV GL-ST-E271 Section 8.5, using the certificate forms No. QF151 Rev.01 and No. QF152 Rev.01. These certificate forms are only to be used for lifting sets certified in accordance with this Type Approval Certificate.

The WLL to be referenced in certificates and marked on lifting sets shall be the maximum working load limit (WLL) of the lifting set, as per the definition in DNVGL-ST-E271.

### **For lifting sets manufactured in accordance with DNVGL-ST-E271**

Lifting sets shall be assembled in accordance with the strength requirements described in DNVGL-ST-E271 Section 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 may be used.

Special lifting sets, assembled in accordance with the principles described in DNVGL-ST-E271 Section 8 and Appendix E, are also covered by this Type Approval. If unsymmetrical slings are to be assembled, the local DNV GL office shall be contacted to review each case, unless otherwise agreed in advance.

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

### **For lifting sets manufactured in accordance with DNVGL-ST-E273**

Prior to selection of the lifting set, the minimum required working load limit (WLL) shall be calculated in accordance with the strength requirements in DNVGL-ST-E273 Section 7.3. The Resulting Sling Force (RSF) is provided in the DNV GL Design Verification Report (DVR) for the Portable offshore unit. The DVR should be made available for the lifting set manufacturer.



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## **Type Approval documentation**

### **Tests carried out**

Prototype breaking load test of assembled wire rope sling leg.

### **Marking of product**

For lifting sets manufactured in accordance with DNVGL-ST-E271: refer to Section 8.  
For lifting sets manufactured in accordance with DNVGL-ST-E273: refer to Section 7.6.

### **Periodical assessment**

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out every 12 months.

END OF CERTIFICATE

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## Appendix 1

**Wire rope slings with aluminium or steel ferrules assembled by Hendrik Veder Group UK Ltd and Universal Inspection (UK) Ltd., covered by this Type Approval Certificate:**

Product Name	Applicable Standards	Material Grades	Parameter range (Multi-leg)			
			SIZE(Ø) [mm]	WLL [t]	PL [kN]	BL [kN]
Steel wire rope	EN12385-4	1960 N/mm <sup>2</sup>	56 max for forerunner	25.0	876	2190
Link assemblies	EN1677-4	Grade 8	22/20~40/32 or equivalent	~28.1	~71	~112
Shackles	EN13889	Grade 6	~35	~13.5	~27	~67.5