



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAS00002V3**  
Revision No:  
**1**

## 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

**First Integrated Solutions Limited**  
**Aberdeen, United Kingdom**

is found to comply with

**DNV standard DNV-ST-E271 – 2.7-1 Offshore containers, March 2023 (Amended December 2024)**  
**DNV standard DNV-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended May 2022)**  
**ISO 10855-2:2024 Offshore containers and associated lifting sets – Part 2: Design, manufacture and marking of lifting sets**  
**IMO/MSC Circular 860**  
**EN 13414-1 Wire rope slings**

## Application:

**1, 2, 3, and 4 leg lifting sets, with forerunner where fitted, for lifting of:**  
**- offshore containers, with maximum gross mass 0 to 25000 kg,**  
**- portable offshore units**

Issued at **Aberdeen** on **2026-07-03**

This Certificate is valid until **2031-07-02**.

DNV local unit: **Aberdeen**

Approval Engineer: **Elisabeth Legg**

for DNV



Digitally signed by Ward,  
Brendan  
Location: DNV Aberdeen, UK  
Contact Info: DNV UK Limited  
Date: 2026.07.03  
08:37:32+0100

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.



Job ID: 262.1-014775-7  
Certificate no.: TAS00002V3  
Revision No: 1

### Product description

This type approval certificate replaces all previous revisions of TAS00002V3.

This type approval certificate covers wire rope lifting sets from 18 mm to 48 mm diameter with turnback and Flemish eye assembled by First Integrated Solutions Limited in accordance with DNV-ST-E271 and DNV-ST-E273.

The wire rope lifting sets assembled by First Integrated Solutions Limited consist of components from the following sub suppliers:

| Component                        | Sub supplier<br>(DNV to be informed and review new sub suppliers)                                                    | DNV Type Approval reference                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Master Links and Quad Assemblies | Crosby Group LLC<br><br>William Hackett Lifting Products Limited<br><br>Yoke Industrial Corp.                        | TAS00001D6<br>TAS00002GE<br>TAS00002GF<br>TAS00002T3<br>TAS0000302<br>TAS00003J2<br>TAS00003J4<br>TAS00003J5<br>TAS000015G |
| Wire rope <sup>1)</sup>          | Bridon-Bekaert Ropes Group<br>Hendrik Veder Group UK Ltd<br>Interkabel GmbH<br>Ropenhagen A/S<br>Usha Martin Limited | N/A                                                                                                                        |
| Shackles <sup>2)</sup>           | Crosby Group LLC<br><br>Gunnebo-Anja Industrier AS<br>Royal Van Beest Group B.V.<br>Yoke Industrial Corp.            | TAS00002GA<br>TAS00002SS<br>TAS00002T2<br>TAS0000563<br>TAS00001B8<br>TAS00003F7<br>TAS0000241                             |
| Ferrules <sup>3)</sup>           | Sahm Splice Ltd.<br>Talurit AB                                                                                       | N/A                                                                                                                        |
| Thimbles <sup>4)</sup>           | Sahm Splice Ltd.<br>Talurit AB                                                                                       | N/A                                                                                                                        |

1) 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 to EN 12385, or equivalent.

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

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

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

Components shall be delivered with the following certificates:

- Master Links, Quad assemblies and Shackles:

- Wire Ropes:

- Thimbles and ferrules:

Certificates based on DNV Type Approval.

To be supplied with traceable material certificates in accordance with EN 10204, inspection certificate, type 3.1.

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 lifting set certificate where that wire is used.

All production testing should be carried out in accordance with First Integrated Solutions Limited internal procedures, to be agreed with the local DNV office.

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 DNV-ST-E271.

#### For lifting sets manufactured in accordance with DNV-ST-E271

Lifting sets shall be assembled in accordance with the strength requirements described in DNV-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.

The manufacturer shall issue product certificates, in accordance with DNV-ST-E271 section 8.5, using the First Integrated Solutions Limited certificate QAF 124 Rev. 4. This certificate template shall only be used for lifting sets certified in accordance with this type approval.

Special lifting sets, assembled in accordance with the principles described in DNV-ST-E271 section 8 and appendix E, are also covered by this type approval. If unsymmetrical slings are to be assembled, the local DNV 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 DNV-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 DNV-ST-E273 section 7.3. The resultant sling force (RSF) is provided in the DNV design verification report (DVR) for the portable offshore unit. The DVR should be made available for the lifting set manufacturer.

The manufacturer shall issue product certificates, in accordance with DNV-ST-E273 section 7.5, using the First Integrated Solutions Limited certificate QAF 125 Rev. 5. This certificate template shall only be used for lifting sets certified in accordance with this type approval.

### Type Approval documentation

| Document No.         | Rev./Date | Title                                                                                                   |
|----------------------|-----------|---------------------------------------------------------------------------------------------------------|
| (2 pages)            | July 2025 | Competence matrix                                                                                       |
| (2 pages)            |           | Competence Frame work                                                                                   |
|                      |           | DNV component suppliers list (spreadsheet)                                                              |
|                      |           | 10. Description of Facilities, Equipment, Competency Management, Quality Systems and DNV Type Approval. |
| QAF 69               | 04        | Wire rope sling checklist sheet (Flemish and aluminium turnback slings)                                 |
| QAF 091              | 02        | Wire rope sling length calculator 45 deg (spreadsheet)                                                  |
| QAF 124              | 4         | Declaration of Conformity: DNV 2.7-3                                                                    |
| QAF 125              | 5         | Declaration of Conformity: DNV 2.7-3                                                                    |
| QAR 32               |           | Wire rope register (spreadsheet)                                                                        |
| QAR 35               | 30.04.26  | Approved Suppliers (spreadsheet)                                                                        |
| QP 08.01 (7 pages)   | 14        | Product Identification and Traceability Procedure                                                       |
| RWI-DNVFL-001        | 0         | Manufacture of Multi-leg Sling - Flowchart                                                              |
| RWI-DNVFL-002        | 01        | Inspection and Test of Wire Rope Slings Flowchart                                                       |
| WI 9.1.1 (3 pages)   | 12        | Destruction test of wire rope                                                                           |
| WI 9.1.2 (11 pages)  | 14        | Manufacture of aluminium turnback wire rope slings                                                      |
| WI 9.1.4 (6 pages)   | 9         | Operation of 200 tonne Horizontal Testing Machine                                                       |
| WI 9.1.10 (4 pages)  | 09        | Verification of wire rope slings to DNV2.7-1, DNV2.7-3 & ISO10855-2                                     |
| WI 9.1.11a (8 pages) | 13        | Manufacture of Flemish wire rope slings                                                                 |
| WI 9.2.13 3 pages    | 10        | Inspection of Wire Rope and Wire Rope Slings                                                            |
| WI 9.8.1 (5 pages)   | 8         | Quality Control Inspections                                                                             |



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In addition, the following documents are also used as information:

- Prototype break test reports.
- DNV periodic assessment reports.
- Sample calculations.
- Material certificates for wire rope.

### Tests carried out

Prototype breaking load test of assembled wire rope sling leg.

### Marking of product

For lifting sets manufactured in accordance with DNV-ST-E271: refer to section 8.

For lifting sets manufactured in accordance with DNV-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 by a DNV surveyor every **12 months** in accordance with DNV-SE-0284. Periodical assessments will, where possible, be harmonised with other surveys and audits conducted by DNV.

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>