



INDUSTRY & FACILITIES

TYPE APPROVAL CERTIFICATE

BV File n° JOB: B170/RJN/2020

Type Approval n° 11MAC00976– A4 – BV

Owner/Manufacturer: **SIVA Ind. e Com. De Arame e Aço Ltda**

Name and address of the factory: SIVA – Goiânia Road, 200 – Morro Branco – Itaquaquecetuba – SP - Brazil

Type description

- Designation: Lifting Sets for Offshore Containers.
- Type designation: Wire rope and Accessories and for Offshore Containers.
- Certification standards: IMO MSC/Circ.860, ISO 10855 1/2 and EN13414-1.
- Type of application: 1, 2, 3 and 4 part Lifting Sets for Offshore Containers

With Maximum Gross Mass up to 25.000 kg, including forerunner if applicable.

Conclusion

After examination of the following documents:

- Inspection Plan SIVA n° PIT-001 rev.11, dated from December 04th 2020;
- Test reports for type approval n° 20114798MCSP, 20114797MCSP, 20114795MCSP and 20114796MCSP dated from November 25th 2020 and 091120MT16, 110920MT13 and 211020MT10
- Checklist – Recognition MSA – n° IND/20/00074, dated from December 03th 2020.
- Type test report n° TRB 0618, 0619, 0620 and 0621 dated from December 04th 2020 review.

The undersigned, Inspector to Bureau Veritas, certifies that the above type meets the applicable requirements of IMO MSC/Circ.860:1998, ISO 10855 1/2 and EN 13414-1: 2003+A2:2008.

This approval remains valid as long as no significant changes are made to the facility, its production rate and its quality system in force. These conditions are assessed during each inspection of series.

This Certificate is valid until December 30th, 2024

This approval is an integral and in dissociable part of the Certification process of offshore containers by Bureau Veritas as defined in BV procedure GM SI 121.

Edson Robadei Dias

Issued by EDSON ROBADEI DIAS

Date of issue: December 30th, 2020.

Checked by BRUNO FONTENELLE

Inspection Centre: BV Macaé



SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Wire ropes slings and accessories as presented on Table 1, certified in accordance with ISO 10855 1/2 for use in offshore containers.

Table 1:

Component	Sizes (range)	Type	Grade	Standard
Wire Rope (1)	19 – 38 mm	Fibre cored rope	1770 Mpa or 1960 Mpa	NBR/ISO 2408:2004 or ANSI/API Spec 9A
Wire Rope (1)	19 - 38 mm	Steel cored rope	1770 Mpa or 1960 Mpa (2)	NBR/ISO 2408:2004 or ANSI/API Spec 9A
Schackles (3)	19 - 38 mm	SIVA curve	8	EN- 1677-1 / RR-C-271D
Links	32 – 50 mm	SIVA	8	EN - 1677-4

- (1) Wire ropes polished or galvanized are to be used. Wire ropes used in fore runner and bottom legs of lifting slings shall be 6-stranded and of type 6x19 or 6x36.
- (2) Steel cored wire ropes from diameters 42 up to 52mm, only to be used with 1960 MPa material grade.
- (3) Bow Shackles With Safety Bolt SIVA.
- (4) Master Links SIVA

For the lifting sets offshore containers the components and their certificates present on table 2 are included:

Table 2:

Component	Suppliers	Type certificate
Wire rope	SIVA ind e com Arame	Quality Certificate
Shackles curve	SIVA ind e com Arame	Quality Certificate
Links	SIVA ind e com Arame	Quality Certificate
Thimbles	SIVA ind e com Arame	Quality Certificate
Ferrules	SIVA ind e com Arame	Quality Certificate

- (1) For new suppliers SIVA must contact BV in order to revise the Type Approval Certificate.
- (2) Wire ropes must not be supplied with material certificate type 3.1 from EN10204 or NBR 2408.
- (3) Schackes must not be removed from the sling.
- (4) Thimbles are in accordance with NBR or equivalent. The thimbles must be supplied with material certificate type 2.2 from EN 10204.
- (5) Ferrules are in accordance with NBR 13411-3 or equivalent .The ferrules must be supplies with material certificate type 2.2. From EN 10204.
- (6) To be reviewed in accordance with new batch of accessories
- (7) All curved shackles with type approval can be used.
- (8) All master links with type approval can be used.

2. DOCUMENTS AND DRAWINGS:

As per Manufacturer's document, reference:

- Inspection test plan SIVA n° PIT-001 revision 11;
- BV Inspection Certificate n° IND/16/00590 (6)
- BV Inspection Certificate n° IND/16/C00591 (6)

3. TEST REPORTS:

- Checklist – Recognition MSA – n° IND/20/00074, dated from December 03th 2020.
- Test reports for type approval n° 20114798MCSP, 20114797MCSP, 20114795MCSP and 20114796MCSP dated from November 25th 2020 and 091120MT16, 110920MT13 and 211020MT10
- Type test report n° TRB 618, 619, 620 and 621 dated from December 04th 2020 review.

4. APPLICATION \ LIMITATION:

The lifting sets must be supplied and assembled based on the requirements of ISO 10855 1\2 taken into account the approved design for the offshore container.

The angle between a sling leg and the vertical, in degrees, shall be assumed to be 45° unless otherwise specified. Angles greater than 45° are not allowed.

Special cases must be treated directly with local BV centre.

The manufacturer shall issue product certificate, using the standard form in document n° PIT-001 Rev 11

This Certificate form is only to be used for slings certificate according to this Type Approval Certificate

5. PRODUCTIOIN SURVEY REQUIREMENTS:

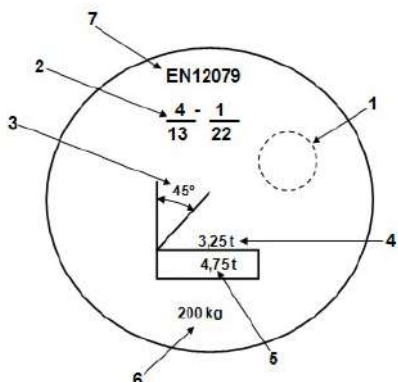
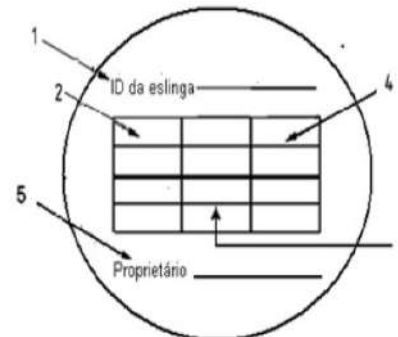
Production tests for lifting sets must be done by SIVA based on their internal procedures and the approved ITP (inspection test plan) and also must be reported to the local BV centre.

Product certificate is to be issued by SIVA and forwarded to be local BV centre for reviewed and validation.

SIVA has to make necessary arrangements for BV inspector to perform visits and product audits at the production site as defined in Manufacturing Survey Agreement – MSA n° 11MAC00975 rev 2

6. MARKING:

The slings are to be marked with certification tag's in accordance with ISO 10855 1/ 2 and as defined on Inspection Test Plan SIVA; PIT-001, revision 11, as follow:

	<p>Front</p> <ol style="list-style-type: none"> 1. Manufacturer's Mark (SIVA). 2. Sling number of legs/diameter – Foreruner /diameter. 3. Sling angle. 4. Shackle size. 5. WLL. 6. Sling weight. 7. Standard Reference (ISO 10855)
	<p>BACK</p> <ol style="list-style-type: none"> 1. Sling ID 2. Inspection Mark, inspection suffix and periodic inspection date. 3. Schacke ID 4. Validity of the last periodic inspection 5. Owner's name

7. OTHERS:

This approval is given under understanding that the Manufacturer will accept full responsibility for informing their Customers of the proper methods of use and general maintenance of the products and the conditions of this approval.

In order to maintain the validity of the type approval, the required surveys according Manufacturing Survey Arrangement are to be carried out in intervals not exceed the provided period.

This Certificate is the revision of the Certificate nº 11MAC/00976 /A3 BV

Inspected by: RENATO FORSTER

Date of issue December 30th, 2020

Checked by: BRUNO FONTENELLE

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