

MANUFACTURING SURVEY ARRANGEMENT

Between "Manufacturer"

ZDB Dratovna a.s.
Bohumin, Czech Republic

and

"DNV GL"

Český lodní a průmyslový registr, s.r.o.
Czechia

Ref. Recognition Certificate: MSARC0000B1N

This Manufacturing Survey Arrangement (MSA) is applicable to

Steel wire rope - intended for lifting application

subject to testing and inspection for conformance with the requirements of DNV GL Rules, as stated herein.

The MSA implies that the manufacturer is authorised to perform the testing and inspection without the attendance of DNV GL and to prepare the certificates which will be validated by DNV GL.

The MSA is valid until **2021-03-28**

The MSA will, however, be invalid if the Recognition Certificate is invalid, or if the manufacturer's Quality System Certificate No. 44 100 077018 is invalid.

The MSA is governed by DNV GL's general terms and conditions. These may be provided upon request.

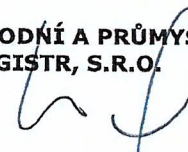
Issued at **Czechia** on **2017-03-29**

for **ZDB DRATOVNA A.S.**



Jan Chmel
Quality Manager

for **ČESKÝ LODNÍ A PRŮMYSL OVÝ**
REGISTR, S.R.O.



Macek, Pavel
District Manager Prague

1. Scope of Work

Identification and Testing according to GL Rules VI 2-2, DNVGL-ST-0377 , DNVGL-ST-0378 and STANDARD FOR CERTIFICATION No. 2.22

(covering the DNVGL inspection and testing items) :

- Identification and marking of test samples (single wires and ropes)
- testing of single wires

Identification, Testing and certification, according to GL Rules VI 2-2, DNVGL-ST-0377 and DNVGL-ST-0378.

(covering all DNVGL inspection and testing items by delivery of LA4 certificate):

Steel wire ropes according to EN 12385 or ZDB DRATOVNA rope construction up to 56 mm:

Wire Rope Construction	Diameter	Type (for all ropes)	NOMINAL STRENGTH (for all ropes)	Standards (for all ropes)
6 X 7	8 to 36mm			
6 X 19	12 to 56mm			
6 X 36	12 to 56mm			
6 X 19M	10 to 48mm			
6 X 37M	12 to 56mm	FC	1570	
8 X 19	12 to 56mm	WSC	1770	EN 12385-2+A1
8 X 36	14 to 56mm	IWRC	1960	
3 X 36	12 to 40mm			
4 X 36	16 to 40mm			
18 x 7	12 to 48mm			
24(W) X 7	12 to 48mm			
35(W) X 7	12 to 48mm			

For the above mentioned product(s) to be certified for conformance with DNV GL Rules, the following conditions will come into force:

1.1 Reference Documents

- I. The Manufacturing Survey Arrangement MSA0000AVT
- II. DNV GL Rules for Classification of Ships - Pt2.
- III. DNV GL Standards for lifting appliances DNVGL-ST-0377 and DNVGL-ST-0378
- IV. GL Rules VI 2-2
- V. STANDARD FOR CERTIFICATION No. 2.22
- VI. Quality System Certificate (QSC) No. 153448-2014-AQ-GER-DAkkS. issued by DNV GL.

- VII. The Manufacturer's documented and accepted procedures for inspection and testing
Title: VA – Erteilung von LA4 Zertifikaten (Major MSA DNV/GL), Revision 00.
- VIII. Others

1.2 Approvals

This MSA does not exempt the manufacturer from release of new introduced manufacturing or testing processes by DNVGL during the validity period.

1.3 Testing and Inspection

The verification of correct sampling of test specimen, mechanical testing and inspection are entrusted to the manufacturer on the basis of documented and accepted procedures and the use of qualified personnel familiar with the DNV GL Rules.

1.4 Assessments performed by DNV GL

Compliance with the conditions agreed in this MSA is subject to control and review by assessing as follows:

- a) Periodical assessments of the MSA function are to be made at 6 months intervals, based on a mutually agreed schedule.
- b) Project-specific assessments or unscheduled spot checks may be made to ensure compliance of the products with Rule requirements.

For this purpose DNV GL shall at all reasonable times be given access to the manufacturing plant and to the relevant manufacturing documents and records.

1.4.1 Agenda for the MSA assessments

The agenda for the assessments will be proposed by DNV GL in the notification of the meeting.

The agenda may typically contain:

- a) Organisation, responsibilities and qualifications of relevant personnel.
- b) The efficiency of the implementation of the MSA.
- c) Operational procedures and instructions related to the MSA agreement.
- d) Manufacturing processes, inspection and testing.
- e) Test records.
- f) wire rope materials, properties and applications.
- g) Product marking and traceability and control of non-conforming product.
- h) Claims, question from clients and others.
- i) Review of possible problem areas raised from previous MSA assessments.
- j) Review of reports from Quality System Audits.
- k) Information to be updated.
- l) Statistical results from testing.
- m) Review of the Quality System Audit reports in connection with ISO QSC.
- n) News from DNV GL.

Any problems found should be handled as non-conformities in the QSC implemented corrective action system. Corrective actions will be re-assessed by DNV GL.

2. Reporting by manufacturer

2.1 Manufacturing Records

The related manufacturing documents related to the specific jobs (this includes also detailed reports for testing of steel wire and socketing, breaking load report, material works certificates (3.1) for end attachments shall be submitted to DNV GL for evaluation.

For certification according to GL Rules VI 2-2, DNVGL-ST-0377 and DNVGL-ST-0378, in addition the prepared LA4 certificate shall be submitted to DNV GL for evaluation and release.

Annual check of testing machines to be documented and provided to DNVGL.

ZDB Dratovna a.s. shall file the a.m. documentation (together with the material works certificates (3.1) for the used rope wires) for a period of 10 years and make it available to the Surveyor/DNVGL upon request.

By including the reference to this MSA agreement in the prepared LA4, the manufacturer is declaring full compliance with this MSA agreement.

2.2 LA4 certificate

For each product to be certified under this agreement, the manufacturer shall prepare a LA4-certificate. The certificate shall:

- Reference to the MSA agreement
- Contain all relevant information as required by the DNV GL Rules.
- Contain the marking of the product
- Include the DNV GL certificate no.

2.3 Non-conformances

The manufacturer is to report any deviation from the DNV GL Rules and this MSA and obtain DNV GL's written approval prior to dispatch of the product.

2.4 Information to DNV GL

The manufacturer is to report any purchaser requirement, which may extend the scope defined in the DNV GL Rules. Any additional requirements outside of the DNV GL Rules are not covered by this MSA.

All customer complaints to products delivered under this MSA agreement shall be reported to the DNV GL local office. A procedure for reporting of customer complaints has to be established by the manufacturer and approved by DNV GL. It is up to DNV GL to decide if further involvement is necessary or not at that time. However, closing of customer complaints reported to DNV GL and corrective actions implemented by the manufacturer will be discussed under the MSA assessment.

3. Reporting by DNV GL

3.1 Issuance of DNV GL certificates

DNV GL will evaluation and release the LA4 certificate, prepared by the manufacturer. The digitally signed certificate will be sent to the manufacturer.

3.2 Information to manufacturer

DNV GL will inform the manufacturer of new or amended rules and regulations which would affect the arrangements authorised.

Reserved certificate numbers to be used for certification based on this MSA agreement will be communicated to the manufacturer.

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3.3 MSA assessments

After each assessment a report will be prepared by DNV GL, and distributed to the involved parties.

4. Marking for Identification

4.1 Marking

Products which have been satisfactorily tested and inspected shall be marked as required by the DNV GL Rules.

Only those products covered by this arrangement are permitted to be marked with this stamp.

Rope identification and Marking:

1. Label on the reel – on both side; The product/label is further to be marked with:
 - DNV GL certificate number
 - VL-stamp furnished by DNV GL
2. The rope itself has to include woven-in identification bands (manufacturer identification) and coloured identification threads for the strength grade:

Manufacturer identification : (manufacturer name or trademark) and
ID-No. 126 (ZDB Dratovna a.s.)

Strength grade 1570 N/mm² : white
Strength grade 1770 N/mm² : green
Strength grade 1960 N/mm² : yellow

Marking of end attachments:

- DNVGL certificate no.
- Month V.L. stamp year

Only those products covered by this arrangement are permitted to be marked with this stamp.

4.2 Handling of the VL stamps

The manufacturer's signer of the MSA agreement is kept responsible for the VL-stamp(s) provided to them as part of this agreement, and the stamp(s) shall only be used by authorised personnel – named in the Quality documentation VA – Erteilung von LA4 Zertifikaten (Major MSA DNV/GL), Revision 00.

The VL-stamp(s) must not be transferred to subsidiary companies belonging to the same group or any other third party.

A worn out or damaged VL-stamp is to be returned to DNV GL who will supply a new stamp.

The VL-stamp(s) shall be returned to DNV GL when the MSA agreement is invalid.

5. Monitoring and Administration of the MSA

The DNV GL Prague office is responsible for:

- 1) Follow up of the MSA through the periodical MSA assessments.
- 2) The regular contact with the manufacturer.
- 3) Review of works certificates.
- 4) Review/Issuing DNV GL certificates.
- 5) Invoicing.

6. Fees and Payment Terms

Certification fees will be charged in accordance with DNV GL's standard fees for manufacturers holding a certified QSC and having implemented a MSA or in accordance with special written agreements, to be updated annually.

7. Regulation for the Certification Services

Regulations with respect to obligations, publications, suspension, withdrawal/cancellation and appeal are given in DNV GL CLASS PROGRAMME No. DNVGL-CP-0337 "General description of services for certification of materials and components", Section 2 [7].

8. Validity

Any changes in production process, procedures or other matters that may influence the validity of the Recognition Certificate, the MSA agreement or the conditions stated therein are to be submitted to DNV GL for evaluation.

The MSA will be invalid if:

- a) The Recognition Certificate is invalid.
- b) The QSC is invalid.
- c) The possible non-conformities from the MSA assessments are not responded to and/or corrective actions are not implemented within the agreed time.
- d) The manufacturer does not comply with the obligations of the MSA agreement.
- e) The certification fees are not paid in due time.

Either party shall have the right to terminate this MSA subject to three months written notice.

9. Liability and Indemnity

If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million.

In this provision the "Society" shall mean DNV GL AS as well as its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

10. Law and Jurisdiction

This MSA shall be governed and construed in accordance with the laws of Norway.

Any dispute arising in relation to or as a consequence of this MSA, which cannot be settled amicably through negotiations between the parties, shall be subject to the courts of Oslo, Norway.