

MANUFACTURING SURVEY ARRANGEMENT

Between "Manufacturer"

Teufelberger Seil GmbH
Wels, Austria

and

"DNV GL"
DNV GL SE
Augsburg

Ref. Recognition Certificate: MSARC0000BBA

This Manufacturing Survey Arrangement (MSA) is applicable to

Steel wire ropes -

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 **2022-12-31**

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

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

Issued at **Augsburg** on **[automatically updated]**

for **TEUFELBERGER SEIL GMBH**

Mr. Gerhard Beder
Head of QM / HS&E

for **DNV GL SE**

Thornagel, Dirk
Station Manager Augsburg / Principal
Surveyor

1. Scope of Work

This MSA agreement is valid for the Teufelberger Seil GmbH production locations in Wels and St. Aegy. d.

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

Steel wire ropes according to EN 12385 or Teufelberger Seil Ges.m.b.H rope constructions up to 74 mm diameter and their end attachments as following:

No	Rope Construction	Diameter min.	range(mm) max.	max. Grade (N/mm ²)	Outer strands compacted	Core strands compacted	Core Type	Core plastic cover
1	16 x K6	8	30	2160	Yes	Yes	Metallic	yes
2	16 x K7	32	42	2160	Yes	Yes	Metallic	yes
3	16 x K17	44	76	2160	Yes	Yes	Metallic	yes
4	6 x 19	8	45	2160	No	No	Metallic	yes
5	6 x 19	8	24	2160	No	No	Fiber	yes
6	8 x K26WS	10	50	2160	Yes	Yes	Metallic	yes
7	8 x K25F	12	54	2160	Yes	Yes	Metallic	yes
8	6 x K36WS	8	44,45	2160	Yes	Yes	Metallic	yes
9	6 x K47WS	50,8	69,85	2160	Yes	Yes	Metallic	yes
10	8 x K36WS	19	73,02	2160	Yes	Yes	Metallic	yes
11	6 x K31WS	22	56	2160	Yes	Yes	Metallic	yes
12	6 x 26 WS	38,1	50,8	2160	No	No	Metallic	yes
13	8 x K42WS	8	66	2160	Yes	Yes	Metallic	yes
14	16 x K19	8	50	2160	Yes	Yes	Metallic	yes
15	18 x K7	25	40	2160	Yes	Yes	Metallic	no
16	18 x K6	13	19	2160	Yes	Yes	Metallic	no
17	9 x K19S	20	32	2160	Yes	Yes	Metallic	yes
18	16 x K7	10	33	2160	Yes	Yes	Metallic	no

1.1 Reference Documents

- I. DNV GL rules for classification of Ships – Pt.2.
DNVGL-ST-0377, Standard for shipboard lifting appliances, latest published edition.
DNVGL-ST-0378, Standard for offshore and platform lifting appliances, latest published edition.
- II. The manufacturer's documented and accepted workinstructions/procedures for inspection and testing (see Appendix 2)
- III. Quality System Certificate ISO 9001:2015 No. 2010092004322, issued by TÜV Austria valid until 2018-12-30.
- IV. MPQA Level 3 Report No. MPQA-PAAA-48

1.2 Approvals

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

1.3 Testing and Inspection

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

The manufacturer is authorized to perform testing and inspection acc. to DNVGL-ST-0377 without the presence of DNV GL:

- Identification and marking of test samples (single wire and ropes)
- Rope cutted to length from DNV GL certified ropes.
- Rope assemblies manufactured from DNV GL certified ropes.
- Tensile/Pull Testing of complete rope test samples
- Single wire test

The manufacturer has to ensure that all parts are traceable to the DNV GL- and 3.1- Certificates.

The testing / inspection shall be applied to all products to be certified by DNV GL under this MSA agreement.

The measuring and control devices used for quality control are to be calibrated in compliance with Teufelberger Seil Ges.m.b.H Quality System.

Products tested and inspected under this agreement shall be marked with the DNV GL certificate number, see the section for marking. All test / inspection documents / reports shall refer to the DNV GL certificate number for traceability to the tested / inspected product. A list of Teufelberger Seil Ges.m.b.H procedures for testing and inspections are listed under Appendix 2.

DNV GL reserves the right to carry out random inspection and / or extension of inspection of products in each production stage and at any time independent from product or customer purchase order.

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) Inspections and witness of breaking tests by the DNV GL Surveyor to ensure compliance of the products with the DNV GL Rules requirements (DNV GL reserves the right to carry out inspections in the office, production site and warehouse)
- c) 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) Product marking and traceability and control of non-conforming product.
- g) Claims, question from clients and others.
- h) Review of possible problem areas raised from previous MSA assessments.
- i) Review of reports from Quality System Audits.
- j) Information to be updated.
- k) Statistical results from testing.
- l) Review of the Quality System Audit reports in connection with ISO QSC.
- m) 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.

1.4.2 MSA is not applicable for

- Products for delivery to installations for which DNVGL-ST-0377 or DNVGL-ST-0378 do not apply
- Products which have been returned to the Manufacturer for reconditioning
- Products to be certified by DNV GL on behalf any other Classification Society or repair
- Repair of steel wire ropes
- Certification and issue of DNVGL Certificate CG4

2. Reporting by manufacturer

2.1 Manufacturing Records

Teufelberger Seil Ges.m.b.H. is to maintain and trace manufacturing records for each product to be certified, eg. Material certificates and testreports, can be traced for each unit. The records are to be kept for at least 10 years.

In order for DNV GL to verify the product certification, the following documentation are to be supplied to DNV GL:

- Test Record and Works Record documentation
- Works certificate wire rope
- Customer Purchase Order / order confirmation
- Works Certificates of wire rope equipment like spelter socket
- Draft Certificate LA4

Rope sockets (open and closed sockets), into which wire rope ends shall be socketed, shall conform to standard EN 13411 or must be approved by DNVGL.

This has to be demonstrated e.g. by CG3 certificate, design assessment or socket manufacturer statement of EN 13411 compliance certificate. The documentation has to send to DNVGL for evaluation and release.

For sockets delivered as separate parts/individual components by the manufacturer, DNVGL product certificates / CG3 shall be provided.

Rope Sockets and other accessories need to fulfill the material requirements at a design temperature of -20°C.

2.2 LA4 Certificate

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

- Reference to the applicable DNV GL Rules.
- Reference the MSA agreement no.
- Fulfil the requirements to LA4 acc. to DNVGL-ST-0377.
- Contain all relevant information as required by the DNV GL Rules.
- Under marking of the product state the DNV GL certificate no.

A copy of the LA4 certificate is to be retained by the manufacturer as quality records and the retention period is to be as stated in the Quality System Manual.

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

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 create a product certificate based on the manufacturer's works certificate. 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.

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. The product is further to be marked with the DNV GL certificate number and a VL-stamp furnished by DNV GL. Only those products covered by this arrangement are permitted to be marked with this stamp. The manufacturer's authorized staff for conducting stamping (see Appendix 1).

4.1.1 Rope identification and Marking

- 1) Label on reel – The label is marked with DNVGL certificate number and VL-stamp
- 2) Acc. to DNVGL-ST-0377 the rope itself has to include woven-in identification bands (manufacturer identification and no. VL-106) and coloured identification threads for strength grade :

Manufacturer identification :
Strength grade 1770 N/mm² : green
Strength grade 1960 N/mm² : yellow
Strength grade 2160 N/mm² : blue
- 3) Marking of end attachments :
DNVGL certificate no.
V.L. stamp
SWL (tonnes)
WT (tonnes/kgs)

4.2 Handling of the VL-stamp(s)

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.

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 Augsburg 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) 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.



MSA No: **MSA0000BBA**

List of personnel, authorised to perform stamping in compliance with the
MSA No. MSA0000BBA

Mr. Johann Schwabeneder

Mr. Fritz Stöger

Mr. Baumann

Wels / Augsburg, 2018-10-17

Mr. Gerhard Beder
for Teufelberger Seil Ges.m.b.H

Mr. Dirk Thornagel
for DNV GL SE , Station Augsburg

Appendix 2:

The manufacturer's documented workinstructions/procedures for inspection and testing:

Instruction Wire Inspection	-	No. 22.6 Rev.
Instruction Wire rope bend hight and bend length	-	No. 22.1 Rev.1
Instruction Schlaglänge	-	No. 22.2 Rev.2
Instruction Spulerei	-	No. 25-42-27 Rev.1
Instruction Drall	-	No. 26-5 Rev.2
Instruction Wire rope test	-	No. 24.1 Rev.1
Instruction Lieferantenbewertung	-	No. 40-10-02 Rev.1
Instruction Release of Suppliers	-	No. 40-10-01 Rev.2
Instruction Ablauf von Fehlermeldungen	-	50-10-04 Rev.6
Instruction Berechtigungsprüfung	-	No. 25-43-05 Rev.2