

MANUFACTURING SURVEY ARRANGEMENT

Between "Manufacturer"

Fjero A/S
Skive, Denmark

and

"DNV GL"
DNV GL
Aalborg SV

This Manufacturing Survey Arrangement (MSA) is applicable to

Certification of Type Approved Hydraulic Cylinders

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

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

The MSA is valid until **2018-10-01**

The MSA will, however, be invalid if the Manufacturer's Quality System Certificate No. **79567-2010-AQ-DEN-DANAK** has expired or is cancelled.

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

Issued at **Aalborg** on **2014-10-01**

for **Fjero A/S**



for **Aalborg SV**



Lars Hansen
Station Manager



MSA No: **R-3281**
Certificate No: **79567-2010-AQ-DEN-DANAK**
File No: **D10.1**
Job Id:

1. Scope of Work

For the above mentioned material/product to be certified for conformance with DNV Rules for Classification of Ships, DNV Rules for Classification of High Speed, Light Craft and Naval Surface Craft and DNV Offshore Standards the following conditions will come into force:

1.1 Reference Documents

- I. The Manufacturing Survey Arrangement, MSA No. R-3281.
- II. DNV Rules for Classification of Ships Pt.4 Ch.6.
- III. DNV Offshore Standards, OS-D101.
- IV. DNV Standard for Certification 2.9, 5-778.93 Approval of hydraulic cylinders.
- V. Standard for Certification 2.22 Lifting Appliances.
- VI. Type Approval Certificate No. P-15070 & P-13603.
- VII. Quality System Certificate (QSC) No.: 79567-2010-AQ-DEN-DANAK, issued by DNV GL.
- VIII. The Manufacturer's documented and accepted procedures for inspection and testing.
- IX. MPQA Level 3 Report No.: MPQA-LHA-23.

1.2 Approvals

The certification of the Manufacturer's Quality System does not exempt the Manufacturer from obtaining approval of new material grades or re-approval when a new manufacturing process or heat treatment process is introduced.

1.3 Testing and Inspection

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

1.4 Audits performed by DNV GL

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

- a) Periodical audits of the MSA function are to be made at intervals not exceeding 12 months, based on a mutual agreed schedule.
- b) Project-specific audits or spot checks may be made to ensure compliance of the materials/products with Rule requirements.

For this purpose the Surveyor 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-audits

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

The agenda will be chosen from this typical list:

- 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) Castings and forgings 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 audits.

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- 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

Each meeting will be minuted by DNV GL, and the record will be distributed to participants. Any problems found should be handled as non-conformities in the QSC implemented corrective action system.

2. Reporting by Manufacturer

2.1 Manufacturing Records

This includes also detailed reports from repair welding of castings and re-inspection after repair welding. All repairs for castings shall be carried out in accordance with DNV Rules Pt. 2 Ch.2 Sec.10 A1000. Minor weld repairs of castings do not require the approval from DNV GL before the repair is commenced, but must be recorded on sketches showing the extent and positions of all weld repairs, including so called "cosmetic weld repairs". Major weld repairs of castings require the approval from DNV GL before the repair is commenced.

2.2 Inspection Report

Inspection certificates are to be prepared by the Manufacturer and the following text is to be printed or stamped on the inspection certificate:

"This is to certify that the material/product described above has been made by an approved process and has been satisfactorily tested in accordance with DNV GL Rules for Classification. This certificate is issued in accordance with the survey arrangement authorised by DNV GL in MSA No. R-3281, which is controlled by regular auditing."

The inspection certificate is to contain all relevant information as required by the Rules. They are to be forwarded to the Surveyor for validation.

A copy of the inspection 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.

Each certificate is to be given a NV Certificate number.

2.3 Non-conformances

The manufacturer is to report any departure from the Rules and the arrangements authorised and obtain the Surveyor's written approval prior to dispatch of the materials.

2.4 Information to DNV GL

The Manufacturer is to report any Purchaser requirement, which may extend the scope defined in the Rules.

All customer complaints to materials/products delivered under this agreement shall be reported to DNV GL. A procedure for reporting of customer complaints has to be established by the Manufacturer and approved by DNV GL. At once the manufacturer has received a customer complaint on material/product certified under this MSA agreement DNV GL local office shall be notified. 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 audit.

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3. Reporting by DNV GL

3.1 Validation of Inspection Reports

The inspection reports prepared by the Manufacturer will be reviewed, endorsed and stamped by the Surveyor, and are only valid with such endorsement and stamping.

3.2 Information to Manufacturer

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



3.3 MSA Audits

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


4. Marking for Identification

4.1 Marking

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


The materials is further to be marked with a  stamp furnished by DNV GL. Only those materials covered by this arrangement are permitted marked .

4.2 Handling of the Steel Stamp

The Quality Assurance Manager is kept responsible for the  stamp and the stamp can only be used by authorised personnel.

The  stamp cannot be transferred to subsidiary companies belonging to the same group.

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

The  stamp is to be returned to DNV GL when the survey arrangement has expired or is cancelled.

5. Monitoring and Administration of the MSA

The DNV GL Aalborg Office is responsible for:

- 1) Surveillance of the MSA through the periodical MSA audits.
- 2) The daily contact with the Manufacturer.
- 3) Review and validation of inspection certificates.
- 4) Invoicing of the material/product certification according to the inspection certificates.
- 5) Filing of the inspection certificates according to internal procedures.
- 6) Review statistical reports.

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6. Fees and Payment Terms

Certification fees will be charged in accordance with DNV GL's current Scale of 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's Standards for Certification No. 1.1 "General Description of the CMC-Services", Section 2.7.

8. Validity

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

The MSA will be invalid if:

- a) The DNV GL Approval of Manufacturer Certificate / Type Approval Certificate is expired or is cancelled.
- b) The QSC has expired or is cancelled.
- c) The possible non-conformities from the MSA audits are not responded to and/or corrective actions are not implemented within the agreed time.
- d) The certification fees are not paid.

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 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.