

MANUFACTURING SURVEY ARRANGEMENT

MSA No:
MSA0000BBR

Between "Manufacturer"

HydroBond Engineering Ltd
Aberdeen, United Kingdom

and

"DNV GL"

DNV GL UK Ltd.
Aberdeen Verification

Ref. Recognition Certificate: MSARC0000BBR

This Manufacturing Survey Arrangement (MSA) is applicable to
**Electrical penetrators for pressure vessels - UNF 1.75", 1.5", 1" Inline and Right Angle;
NPT 0.5", 0.75", 1", 1.25" Inline and Right Angle; DDC Penetrator Range 0.75", 1" Inline and
Right Angle; 1 to 55 Way**
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 **2022-10-23**

The MSA will, however, be invalid if the Recognition Certificate is invalid, or if the manufacturer's Quality
System Certificate No. 10066430 is invalid.

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

Issued at **Aberdeen Verification** on **2018-10-24**

for **HYDROBOND ENGINEERING LTD**

Mark Hendry
Head of Technical Support

for **DNV GL UK LTD.**
for DNV GL



This document has been digitally signed and
will therefore not have handwritten signatures
Manson, Stuart John
Surveyor

Manson, Stuart John
Team Lead

1. Scope of Work

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. DNVGL-OS-E402, Diving systems, January 2017
- II. Quality System Certificate (QSC) No. 10066430 issued by LRQA.
- III. The Manufacturer's documented and accepted procedures for inspection and testing
 - Acceptance Testing of Helium/Hydrostatic Electrical Penetrators to meet DNV-OS-E402 Edition January 2017, No. HTS-120E, Issue 05, 06/02/18.
 - Acceptance Testing of Helium/Hydrostatic Electrical Penetrators to meet DNV-OS-E402 Edition January 2017, No. HTS-120/650/E, Issue 01, 14/08/2018.
 - Design & Development – Inputs, OP 04.2, Version 0.4, 18/05/2018.
 - Product Identification and Traceability, OP 08.0, Issue 05, 28/10/09.
 - Control of Non Conforming Product, OP 8.3, Issue 2, 27/10/2015.
 - HBE & HCS Planning Control, OP 09.6, Issue 07, 07/03/2017.
 - Inspection and Testing, OP 010.0, Issue 13, 08/03/13.
- IV. Hydro Group Integrated Manual, Issue 01, 22/06/2018.
Organisation Structure (26/09/17).

1.2 Approvals

This MSA does not exempt the manufacturer from obtaining approval of new products or re-approval when a new manufacturing process or load condition is introduced.

1.3 Testing and Inspection

The verification of correct 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 above mentioned documents and 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) 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 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

It is the manufacturer's responsibility to ensure that all required manufacturing data, test and inspection records required for proving conformance to DNVGL-OS-E402 shall be retained. All records shall be retained for a minimum of 10 years (ref. DNVGL-OS-E402 Ch.3 Sec.1 8.4.2).

2.2 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.

2.3 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 input. 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, and shall include, as a minimum, manufacturer's name, job number, part number. The product is to have the DNV GL VL-stamp included in the markings. Only those products covered by this arrangement are permitted to be marked with this stamp.

4.2 Handling of the VL-stamp

The manufacturer's signer of the MSA agreement is kept responsible for the VL-stamp provided to them as part of this agreement, and the stamp shall only be applied by authorised personnel.

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

5. Monitoring and Administration of the MSA

The DNV GL Aberdeen 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 DNV GL Approval of Manufacturer Certificate(s) / Type Approval Certificate(s) is invalid.
- c) The QSC is invalid.
- d) The possible non-conformities from the MSA assessments are not responded to and/or corrective actions are not implemented within the agreed time.

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- e) 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.