



DET NORSKE VERITAS

MANUFACTURING SURVEY

ARRANGEMENT

MSA NO. R-2004 REV 02
The MSA consists of 5 pages

Between

HYDRO BOND ENGINEERING LTD
ABERDEEN AB23 8GW, United Kingdom

and

Det Norske Veritas BV
DNV ABERDEEN OFFICE

Extent:

This Manufacturing Survey Arrangement (MSA) is applicable to
Electrical Penetrators for Pressure Vessels
with type designation(s)
Bell Penetrator Range
UNF 1³/₄", 1¹/₂", 1" Inline and Right Angle;
NPT 1/2", 3/4", 1", 1¹/₄" Inline and Right Angle;
DDC Penetrator Range 3/4", 1" Inline and Right Angle;
1 to 55 Way
for
Diving Systems
subject to testing and inspection for conformance with the
requirements of DNV Offshore Standard DNV-OS-E402
"Offshore Standard for Diving Systems",
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.

Validity

The MSA is valid until 2011-12-31
The MSA will, however, be invalid if the Manufacturer's Quality
System Certificate No. LRQ 0850566 has expired or is cancelled.



If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

1. SCOPE OF WORK

Testing and inspection of products according to DNV-OS-E402 "Offshore Standard for Diving Systems", and other reference documents.

1.1 Reference Documents

- I. DNV Offshore Standard DNV_OS-E402
- II. DNV Manufacturer Product Quality Assessment report No. MPQA-WLINES-8 performed by DNV Aberdeen
- III. Hydro-Bond Engineering Operating Procedures:
OP 04.2 HBE Design Control – Production Interface
OP 08.0 Product Identification and Traceability
OP 10.0 Inspection and Testing
- IV. Hydro-Bond Engineering Manufacture Process Specification No. 001 "Manufacture of Hydro-Bond Electrical Penetrator"
- V. Hydro-Bond Engineering Test Specification No. 120E "Acceptance Testing of Helium/Hydrostatic Electrical Penetrators to meet DNV-OS-E402 January 2004"
- VI. Quality management Systems Certificate No: LRQ 0850566

1.2 Approvals

This Manufacturing Survey Arrangement does not exempt the Manufacturer from obtaining approval of new products or re-approval if there are modifications to the design and/or the manufacturing processes.

1.3 Testing and Inspection

The verification of correct testing and inspection is entrusted the Manufacturer on the basis of documented and accepted procedures and the use of qualified personnel familiar with the above mentioned documents.

Herewith DNV reserves the right to carry out random testing and/or extension of testing of products in each production stage and at any time independent of customer's purchase order.

1.4 Certificates

Upon completion of the production inspection and testing, the manufacturer may issue certificates as described in section 2 of this MSA.



1.5 Audits performed by DNV

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

DNV will perform retention audits in the first year and annually for the rest period of validity. DNV also reserves the right to perform additional audits, if any non conformities or quality problems are found by DNV.

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.

1.6 Qualification of Personnel

Personnel appointed by the Manufacturer responsible for correct testing and inspection shall be trained in the following:

- Valid DNV Rules for the products
- Contents of this agreement
- The quality procedures of Hydro-Bond Engineering Ltd. directly related to DNV Offshore Standard DNV-OS-E402

These personnel are to have documented authority to:

- Hold parts or products until all the required inspections and test have been carried out and documented according to own inspection and test procedures, this MSA agreement and other relevant DNV Rules.
- Monitor and follow up on the progress of non-conformities and corrective actions to ensure compliance with item 5 in this MSA Agreement.

1.7 Subcontracted Components

All subcontracted components/materials must be delivered with documentation as required in DNV-OS-E402.

2. REPORTING BY MANUFACTURER

2.1 Manufacturing Records

Records shall be made of the relevant manufacturing data and the results of all specified testing and inspection necessary for conformance to the DNV-OS-E402

The records should be retained by the manufacturer for at least 10 years and made available to the Surveyor upon request. A master reference list is to be maintained.



2.2 Certificate

Product Certificates on DNV Form 20.92a are to be prepared by the Manufacturer for each component manufactured under this MSA (for batch production of identical items, the certificate may refer to all items). A template for the certificate will be issued by DNV Aberdeen, and this should be made available to authorised persons only.

Each certificate is to be given a unique number assigned by DNV Aberdeen.

2.3 Experience feedback

The Manufacturer will inform DNV of any failures affecting safety occurring with DNV classed equipment. This applies even if the damages appear to be caused by sources external to the deliveries of the Manufacturer.

2.4 Non-conformances

The Manufacturer shall report any deviations from standards, the arrangements in accordance with MSA and the Quality System to DNV. Non-conforming products should be rejected if no approval is given by DNV. The corrective actions or alternative dispositions of non-conforming parts or products should be documented and presented to the DNV surveyor prior to any continued production or product testing.

3. REPORTING BY DNV

3.1 Validation of Certificates

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


3.2 Experience feedback

DNV will inform the Manufacturer of reported failures occurring on equipment produced by the Manufacturer.

4. MARKING FOR IDENTIFICATION

4.1 Marking

Electrical Penetrators for pressure vessels which have been satisfactorily tested and inspected shall be marked with the manufacturer's name, the job number and part number.

Additionally, the DNV Logo  shall be included in the marking.



5. WITHDRAWAL OF MSA

This MSA can be withdrawn by DNV at any time when any of the following points applies:

- Quality System is no longer operating or functioning satisfactorily
- Manufacturer refuses periodical audits, requested non-scheduled audits or extension of inspection/testing
- Major quality problems
- Lack of information related to deviations of design

6. FEES AND PAYMENT TERMS

- Retention audits, spot-check audits and any special follow-up required will be charged at cost

7. REGULATION FOR THE CERTIFICATION SERVICES

When DNV rules are changed, the MSA shall be reviewed and, if necessary, changed correspondingly.

For any other reason, the MSA may be revised, provided that both DNV and the Manufacturer mutually agree. However, DNV has the right to require additional inspection or testing in their presence if found necessary. This may, for instance, be applicable for new designs or if special problems have been experienced.

8. OPERATING UNIT

DNV Aberdeen is responsible for issuance and handling of this MSA.

DNV Aberdeen has also the right to access to the Manufacturer at any time, if found necessary.

9. REVISION

Rev 2 – Address details changed due to customer relocation of premises, ref MQPA-GREA-6.

Place and date: 19/11/09 ABERDEEN

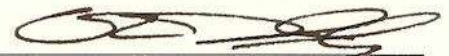
for Hydro-Bond Engineering Ltd.



Chris Moffat
Quality Manager



for Det Norske Veritas AS



Graham Duff
Head of Section