

DET NORSKE VERITAS

MANUFACTURING SURVEY

ARRANGEMENT

MSA NO. R-1788

The MSA consists of 5 pages

Between

IMO AB

Sweden

and

Det Norske Veritas AS

STOCKHOLM OFFICE

Extent

This Manufacturing Survey Arrangement (MSA) implies that the manufacturer is authorised to perform all testing and inspection stated on the following pages and to complete the documentation for certification without the DNV surveyor being present.

DNV will carry out product audits at intervals as stated in this MSA to verify that the products comply with the stipulated requirements.

This MSA covers lubricating and fuel oil pumps.

Validity

The MSA as such is valid until 2011-06-30.

This MSA will however, become invalid when the manufacturer's Quality System Certificate 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

For screw type lubricating oil pumps and fuel oil pumps to be certified according to Det Norske veritas Rules for Classification of Ships, Mobile Offshore Units and High Speed and Light Craft, the following will come into force:

1.1 Reference Documents

Valid editions of the following DNV Rules

1.2 Governing documents

IMO's Quality System Procedures as accepted by DNV.

1.3 Testing and Inspection

The verification of correct testing and inspection is entrusted to the manufacturer based on documented and accepted procedures for inspection and testing, and the use of qualified personnel familiar with the DNV Rules.

The following tests are to be performed:

- Hydraulic pressure test 1,5 x max working pressure
- Capacity tests (rated speed, pressure head, viscosity etc.)

1.4 Pumps marked with other than IMO brand name.

Pumps manufactured by IMO but marked with other than IMO brand will follow IMO's quality procedures as stated in 1.2 and testing in accordance with 1.3. Product certificates shall be issued in accordance with 3.1.



2. Audits

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

- a) Periodically quality system to be performed as specified in the conditions for the Quality System Certificate.
- b) Periodically audits of the MSA function, governing documents above, are to be performed by the appointed local DNV surveyor, at intervals not exceeding 12 months.
- c) Renewal MPQA not later than the expiration date of this MSA document.

The manufacturer agrees to give free access to the Surveyor for this purpose. The frequency of the product audit will be re-considered annually. Principally it will depend on the number of products certified by DNV and on the results of the periodical assessments.

3. Reporting by the Manufacturer

The manufacturer will inform DNV about orders requesting certification according to DNV Rules. The manufacturer will file the documentation of testing and inspection mentioned in 1.3 above and make it available to the Surveyor upon request and will file this documentation for a period of at least 10 years.

Any change in product range or production procedures, non conformance or other matter that may influence the validity of the MSA or conditions stated herein are to be submitted to DNV for evaluation.

3.1 Product certificate

Product certificate, Det Norske Veritas Form no. 79.30a, is to be prepared by the manufacturer and forwarded to the local DNV office for validation, stamping and signing.

The following information shall be included as a minimum:

- | | |
|------------------------------|---|
| - Certificate No. and date | - Specific liquid |
| - Installation/Yard/ID No.. | - Viscosity |
| - Product Type and serial No | - Test liquid |
| - Reference to this MSA | - Viscosity of test liquid |
| - Marking of product | - What the pump was driven by when tested |
| - Service of pump | - Materials – pump body |
| - Capacity | - Materials - screw |
| - Delivery head | - Test pressure applied |
| - Working principle | - Revs. per min |

Material for pump housing is to be delivered with works certificate (W).



4. Reporting by DNV

Product Certificates will be reviewed and endorsed by DNV and copies filed for 10 years. DNV will inform the Manufacturer of new or amended Rules and regulations which would affect the arrangements authorised.

5. Product Marking

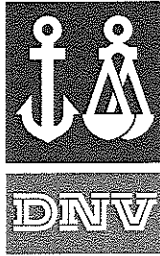
Each product is to be stamped with a steel stamp supplied by Det Norske Veritas and marked with SKM and the product serial number which is traceable to the product certificate. The Quality System manager is responsible for correct stamping and use of the stamp. The stamp may only be used by personel authorised to carry out identification stamping of products. The manufacturer will keep the local DNV station updated on authorised personnel. The stamp is to be returned to the local DNV station when this MSA expires or is cancelled.

A worn out damaged stamp is to be returned to the local DNV station who will supply a replacement. In addition the product is to be marked with:

- Manufacturer's name or trade mark
- Product's Type designation
- Test pressure (not applicable to all sizes)

6. Fees

Certification fees will be charged in accordance with Det Norske Veritas' Scale of Fees in force of time of certification and auditing.



MSA. No.: R-1788

7. Appendices


Attached hereto:


- List of approved pump types and sizes.

End of conditions

Place and Date:

M. as F. as
for IMO AB


for Det Norske Veritas
SCKHOLM





DET NORSKE VERITAS

IMO AB

APPENDIX MSA no. R-1788

PUMP TYPE:	GENERATION
ACD/ACP	6
ACE/ACP	1, 2 and 3
ACE OPTILINE	3, 4
ACF	4, 5
ACG/ACP	6, 7
ACG OPTILINE	8
UCG	6, 7
UCF	4, 5
LPQ	1

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