DET NORSKE VERITAS

QS CERTIFICATE OF ASSESSMENT-EC

Application of the Council Directive 97/23/EC of 29 May 1997 on Pressure Equipment, as amended.

CERTIFICATE NO. PED-H-138
This Certificate consists of front page + Appendixes

This is to certify that the quality system of

Norske Ventiler as
ÅGOTNES, NORWAY

for design, manufacture and testing of

Ball, Check, Gate, Globe Valves, Strainers, Orifice Plates and Steel Pipe Fittings

as specified in the Appendix I to this certificate, is found to comply with the requirements of the Pressure Equipment Directive

The Manufacturers Quality System for the equipment has been assessed with respect to the procedure of conformity assessment as described in Module H, in the Directive

Further details of the product and conditions for the certification are given overleaf.

Place and date
Høvik, 01-10-2008
for DET NORSKE VERITAS AS

Marianne Spæren
Head of Section, ZNYNO416

CE
Notified Body No.:
0575
Local Office
DNV Oslo

This Certificate is valid until
01-10-2011

Hans Dyrdal Rasmussen
Principal Engineer

Notice: The certificate is subject to terms and condition, if any, overleaf. Any significant changes in design or construction of the product, the quality system or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with the Council Directive, as amended.

APPENDIX 1, REV. NO. 0

SCOPE AND CONDITIONS

Products covered by this certificate

DNV has carried out the QS assessment of the Manufacturer's quality system to verify that the relevant requirements relating to the following valves have been implemented.

Type of Valves	Design code	Size	Class	Accepted for		Material, all valves	
				PED Category	Fluid group I	Material [1) 2)]	Temperature range °C [6)]
Ball	API 6D EN-ISO 17292 ASME B 16.34	DN15 – DN150	PN20 – PN420	III	Gas fluid	Titan	- 46 to 100
Check	BS 1868 EN-ISO 15761 ASME B 16.34 API594	DN15 – DN 300	PN20 – PN690	III	Gas fluid	6Mo	-101 to 300 [3)]
						Monel 400	-101 to 150
Gate	API 600/602 BS 5352- BS1414 ASME B 16.34	DN15 – DN50 DN50 – DN80 – DN100 – DN150	PN20 – PN420 PN20 – PN250 PN20 – PN100 PN20 – PN50	III III III II	Gas fluid	Duplex	-46[4)] to 250
						Ni-Al-bronze	-101 to 200
Globe	BS 1873 BS 5352- BS1414 ASME B 16.34	DN15 – DN50 DN50 – DN80 – DN100 – DN150	PN20 – PN420 PN20 – PN250 PN20 – PN100 PN20 – PN50	III III III II	Gas fluid	Hastelloy	- 101 to 350
						SS 316	-101 to 300 [5)]
Orifice Plates [7)]	ASME B31.3 API 590	-	-	NA	Gas fluid	Inconel 600	-29 - 538
						Inconel 625	-196 to -538
Steel Pipe Fittings [7)]	ANSI B16.11 BS 3799	-	-	NA	Gas fluid	CS	0[6)] to 300
						CS LF2	-46 to 300

Notes:

1) Listed type of materials may be used for type of valves in grades of materials which have been subject to Particular Material Appraisal, PMA, and under the conditions as stated in Appendix 2 of this Certificate.
PMA-documents having reference to certificate PED-H-97, is still valid for this certificate.
2) Materials shall have full traceability to the material certificates.
3) For seawater service, max.temperature is 20°C as specified in NORSOK M-001, Table 6.
Otherwise, the limitations in applied design code/standard and performed risk analyses for intended application guarantied for the product.
4) Impact properties shall be documented for all duplex materials and for carbon steels used below - 29 ° C.
5) When stress corrosion is considered possible, temperature shall be maximum 60 °C.
6) See restrictions for minimum design temperature in PMA documents.
7) Components not to be CE-marked. Ref.: WPG Guideline 1/22.

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APPENDIX 1, REV. NO. 0 (CONTINUED)

Conditions:

1. The system approval is only valid for the equipment listed above. For other equipment, an application for extension of the certificate must be sent to the local DNV Office.

2. The local DNV Office must be informed of any sub suppliers for main pressure retaining parts.

3. The manufacturer shall inform the local DNV office of the intended schedule of production for equipment to Category III.

4. Periodical audits and unexpected visits will be held, in order to verify that the Manufacturer duly fulfils the obligations arising out of the approved quality system.

5. The Manufacturer must give information of any intended adjustments of the Quality System to DET NORSKE VERITAS, who will assess the changes and decide if the certificate remains valid.

6. When required by Annex I Section 4.2 and the Pressure Equipment Directive, "Particular Material Appraisal" for equipment of category III must be given by DET NORSKE VERITAS AS.

The manufacturer complies with the Council Directive 97/23/EC on Pressure Equipment and is allowed to affix the CE Mark followed by the DNV identification number 0575.

Place and date
Høvik, 01-10-2008

Hans Dyrdal Rasmussen
Principal Engineer

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APPENDIX 2, REV. NO. 0

PARTICULAR MATERIAL APPRAISAL FOR PRESSURIZED PARTS

The materials referred to in documents listed in the table nos. 1 to 4 below have been subject to particular material appraisals as required by directive 97/23/EC, annex 1 sec. 4.2b. The documents describe, in a complete and concise manner, the characteristics of the materials and their conformity to the directive 97/23/EC.

The materials subjected to the Particular Material Appraisal may be used in pressure equipment in accordance with directive 97/23/EC and to the conditions as stated in the documents.

1. Forged materials

Title	Rev.	Date
ASME SA-105	0	2008-10-22
ASME SA-182, UNS S31254	0	2005-10-03
ASME SA-350, grade LF2	0	2005-10-03
ASTM A-694, grade F52	0	2008-10-22
ASME SB-381, grade F2	0	2005-10-03
ASME SB-564. type UNS N06022	0	2005-10-04
ASME SB-564, type UNS N06200	0	2005-10-04
ASME SB-564. type UNS N10276	0	2005-10-04
ASME SB-564, type UNS N10665	0	2005-10-04

Table 1: List of Particular Material Appraisals for forged materials

2. Cast materials

Title	Rev.	Date
ASME SB-148, grade UNS C95500	0	2005-10-03
BS 1400, grade AB2	0	2005-10-04

Table 2: List of Particular Material Appraisals for cast materials

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3. Bars, shapes and rods

Title	Rev.	Date
ASME SA-276, grade UNS S31803	0	2005-10-04
ASME SA-479, type 316	0	2005-10-03
ASME SA-479, type 316L	0	2005-10-03
ASME SA-479, grade UNS S32550	0	2005-10-03
ASME SA-479, grade UNS S32750	0	2005-10-03
ASME SA-479, grade UNS S32760	0	2005-10-03
ASME SB-164, type UNS N04400	0	2005-10-03
ASME SB-166, grade UNS N06600 ((Inconel 600)	0	2008-02-12
ASME SB-348, grade 2	0	2005-10-03
ASME SB-446, type UNS N06625	0	2005-10-03
ASME SB-473, grade UNS N08020 (alloy 20)	0	2008-02-12

Table 3: List of Particular Material Appraisals for bars, shapes and rods

4. Bolting

Title	Rev.	Date
Bolting materials	0	2005-10-06

Table 4: List of Particular Material Appraisals for bolting materials

Place and date
Høvik 01 October 2008

Hans Dyral Rasmussen
Principal Engineer