



DET NORSKE VERITAS

TYPE EXAMINATION CERTIFICATE

[2] EQUIPMENT INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC

[3] Type Examination Certificate Number: **DNV 10 ATEX 96564X** Rev 1

[4] Equipment: **Model 5100 HD Analyzer**

[5] Applicant – Manufacturer or Authorized representative: **AMETEK Process Instruments**

[6] Address: **150 Freeport Rd.
Pittsburgh, PA 15238
USA**

[7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV certifies that this equipment has been found to comply with the Essential Health and Safety requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential reports listed in section 14.

[9] Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:
EN 60079-0: 2012, EN 60079-15: 2010, EN 60079-11:2012 and EN 60079-28:2007

[10] If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This TYPE EXAMINATION CERTIFICATE relates only to the design, examinations and tests of the specified equipment. If applicable, further requirements of this Directive may apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

[12] The marking of the equipment shall include the following:

 **II 3 G Ex nA nC ic op is IIC T3 Gc -20°C < Tamb < +50°C**

Høvik, 2013-11-26
for Det Norske Veritas AS

Bjørn Spongsveen
Certification Manager



Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

The digitally signed and electronically distributed document is the original and valid certificate. Ref.: www.dnv.com/digitalsignatures

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 300,000. 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.



[13]

Schedule

[14] **TYPE EXAMINATION CERTIFICATE No.:** DNV 10 ATEX 96564X

Rev 1

Certificate History

Revision	Description	Report no.	Issue date
-	Original certificate	2012-3040	2012-02-24
1	Updated standard references and added ic and op is ratings	2012-3040	2013-11-26

[15] **Description of Equipment:**

The Ametek Model 5100 HD analyzer is a gas analyzer that uses a laser spectrometer. The unit has two enclosures, one that houses the electronics and the other that houses the sensing elements and sample system. There is a heater in the sample system enclosure. There are relays in the unit that are nC, and pushbuttons on the controller that are ic.

Type Identification

5100 HD

Electrical Data

240 VAC, 450 VA

120 VAC, 450 VA

12 VDC, 45 Watts

Degrees of protection (IP Code)

IP65

[16] **Project No:** PRJC-297991-2011-PRC-USA

Descriptive documents

Number	Title	Rev	Date
9700-101-VE (32 sheets)	5100 HD Analyzer Certification Drawing	F	2013-10-29
-	5100 HD Technical File	E	2013-10-18
90709VE	5100 HD Instruction Manual	J	-
9000-119-VE	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, AC POWERED	G	2013-05-22
9000-119-VE BOM	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, AC POWERED BOM	G	2013-09-27
9000-118-VE	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, 24 VDC	E	2013-05-22
9000-118-VE BOM	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, 24 VDC BOM	G	2013-09-27
9000-140-VE	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, AC POWERED	G	2013-08-13

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Number	Title	Rev	Date
9000-140-VE BOM	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2 , AC POWERED BOM	G	2013-09-27
9000-141-VE	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, 24 VDC	F	2013-05-01
9000-141-VE BOM	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, 24 VDC BOM	F	2013-09-27
95608WE	5100 HD, DUAL LASER, DIV 2/ZONE 2, AC POWERED	N	2012-10-02
95608WE BOM	5100 HD, DUAL LASER, DIV 2/ZONE 2, AC POWERED BOM	P	2013-09-27
9000-111-VE	5100 HD, DUAL LASER, DIV 2/ZONE 2, 24 VDC	G	2013-05-22
9000-111-VE BOM	5100 HD, DUAL LASER, DIV 2/ZONE 2, 24 VDC BOM	G	2013-09-27
9000-131-VE	5100 HD, SINGLE LASER, DIV 2/ZONE 2, AC POWERED	D	2013-05-22
9000-131-VE BOM	5100 HD, SINGLE LASER, DIV 2/ZONE 2, AC POWERED BOM	H	2013-09-27
9000-132-VE	5100 HD, SINGLE LASER, DIV 2/ZONE 2, 24 VDC	H	2013-05-22
9000-132-VE BOM	5100 HD, SINGLE LASER, DIV 2/ZONE 2, 24 VDC BOM	H	2013-09-27

Routine tests

Routine dielectric test required in accordance with EN/IEC 60079-15:2010 Clause 23.2.1 (clause 6.5)

[17] Special conditions for safe use

Installation of unit must be shaded to protect the window from direct sunlight and direct light from luminaires

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE

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 300.000. 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.