



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13506**

This is to certify that the
Gas Detector

with type designation(s)
IDS 0105, IDS 0115, Dräger PIR 7200

Manufactured by
Dräger Safety AG & Co. KGaA
LÜBECK, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Location classes:

Temperature	Humidity	Vibration	EMC	Enclosure
D	B	B	B	C / IP66/IP67, D / IP68 (tested at diving depth of 1m, duration 24h)

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2013-10-30**

for **Det Norske Veritas AS**

DNV local station: **Hamburg CMC Northern & Eastern Germany**

Approval Engineer: **Andrzej Gdaniec**

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Odd Magne Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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.

Product description

The IDS 0105, IDS 0115 are fixed infrared gas detectors to be used for detection of carbon dioxide in the range of 0...0,2...100% vol.

Software version 1.1.

Application/Limitation

The Type Approval covers hardware and software listed under Product description.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Location of detectors to be in accordance with relevant parts of the Rules.
Instruction Manual covering each specific installation to be available on board.

When the units are used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Clause for application software control

All changes in software are to be recorded. Major changes in the software are to be approved before implementation.

Type Approval documentation

Booklet "Gas Detector IDS 01xx" including test reports, manuals, data sheets, certificates and drawings, not dated.

Dräger PIR 7000/ Dräger PIR 7200 (IDS 01xx) Instruction for Use, Edition 07, January 2012.
Drawing No. SE20519, dated 2012-06-29.

Test reports included in booklet:

No. 408.345.2A by CEcert GmbH Wismar Germany, dated 27 May 2009.
No. 408.345.1A by CEcert GmbH Wismar Germany, dated 27 May 2009.
No. DAe-EC-TR-061/2007 Rev. 0 by Dräger Medical Aerospace GmbH, Lübeck, Germany, dated 13.07. 2007.
No. P50-09-0030e by Rail System Testing GmbH, Hennigsdorf, Germany, dated 18. 02. 2009.
No. PFG-no. 41300208P by DEKRA EXAM GmbH, Essen, Germany, dated 30.10. 2008.

DNV Hamburg periodical assessment report for A-12576, dated 2013-10-22.

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE