



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-11330
This Certificate consists of 4 pages

This is to certify that the
Flame Detector

with type designation
40/40I Triple IR Flame Detector
with Mounting Bracket 40/40-001

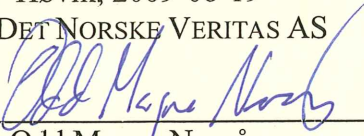
Manufactured by
Spectrex Inc.
Cedar Grove, United States

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	D
Humidity	B
Vibration	B
EMC	B
Enclosure	C

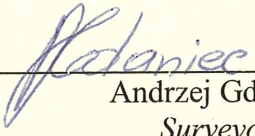

Place and date
Høvik, 2009-06-19
for DET NORSKE VERITAS AS


Odd Magne Nesvåg
Head of Section



Local Office
DNV New York

This Certificate is valid until
2013-06-30


Andrzej Gdaniec
Surveyor 

Notice: 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.



Cert. No.: A-11330
File No.: 891.40
Job Id.: 262.1-005389-2

Product description

Model 40/40I is a triple IR flame detector with three sensitive infrared channels processing the signal to analyze the dynamic characteristics of all conceivable types of hydrocarbon fires.

Manufacturer

Spectrex Inc.
Peckman Industrial Park
218 Little Falls Road
Cedar Grove, New Jersey 07009, USA

Place of production

Spectrex Inc.
Peckman Industrial Park
218 Little Falls Road
Cedar Grove, New Jersey 07009, USA

Application/Limitation

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

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 A 202 will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

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.

When the type approved software is revised (affecting all future deliveries) DNV is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.



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Type Approval documentation

Doc. name	Doc. no.	Doc. version
SharpEye 40/40I, Triple IR (IR3) Flame Detector data sheet	DS-F-40/40I	November 2008
SharpEye Triple IR (IR3) Flame Detector Model 40/40I User's and Maintenance Manual	TM 40/40I	September 2008
QualiTech, Environmental&Mechanical Laboratory Test Report flame detector	20080528-0944 Edition 01	28/05/2008
LPCB letter confirm. testing against EN54-10 (report No. TE243256).	SPEX/BRE/473/AJD	2008 Sept. 30
EMCTest Report for 40/40I	SPC 231008	2008 October 23
QualiTech, Environmental&Mechanical Laboratory Test Report 40/40I	20090427-0943 Edition 01	27/04/2009
QualiTech, Environmental&Mechanical Laboratory Test Report 40/40I&20/20MI	20090215-1335 Edition 01	15/02/2009

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
Relevant tests of application functions in accordance with EN54-10.

Certificate retention survey

The scope of the retention/renewal survey 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



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

END OF CERTIFICATE