1 # TYPE EXAMINATION CERTIFICATE

2 **Intrinsically Safe System Intended for use in Potentially Explosive Atmospheres**

3	Type Examination Certificate Number:	**Baseefa11Y0277 Issue 2**
4	System:	**TraceTek TT-TAR Leak Detection System**
5	Certificate Holder:	**nVent Thermal LLC**
6	Address:	**899 Broadway Street, CA, 94063-3104, USA**

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

8 Baseefa certifies that this system has been found to comply with the following standards

EN 60079-25: 2010

9 The examination and test results are recorded in confidential Report No's. – **see certificate history.**

10 If the sign "X" is placed after the certificate number, it indicates that the system is subject to special conditions of safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified intrinsically safe system and not to specific items of equipment therein. It is the responsibility of the system certificate holder to supply the relevant documentation to the installer of the intrinsically safe electrical system referred to in this certificate.

The installer has the responsibility to ensure that the system conforms to the specification laid down in the Schedule to this certificate and has satisfied routine verifications and tests specified therein.

12 The marking of the system shall include the following :

Ex ia IIA T4

Baseefa Customer Reference No. **0865**

Project File No. **17/0865**

SGS Baseefa Limited
Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail baseefa@sgs.com web site www.sgs.co.uk/sgsbaseefa
Registered in England No. 4305578.
Registered address: Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN

M POWNEY
Certification Manager

R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13 # Schedule

14 ## Certificate Number Baseefa11Y0277 – Issue 2

15 System Description

The TraceTek TT-TAR Leak Detection System is designed to detect the presence of hydrocarbons, organic solvents, mineral acids or conductive fluids that may be leaking from a storage vessel or pipe. If a leak is detected a signal is sent to the safe area equipment so that the appropriate action can be taken.

The system consists of an MTL-5541 repeater power supply Located in the Safe Area, and a TraceTek TT-TAR Transducer with, up to 4 TraceTek TT-FFS Fast Fuel Sensors or up to 300m of either TT-3000, TT-5000, TT-5001 or TT-7000 Sensing Cables with optional end of line TT-MINI-PROBE located in the Hazardous Area. The sensing cables are for the detection of Conductive Fluids, Hydrocarbon Sensing Cable, Organic Solvents or Strong Mineral acids. In the event of a leak the Hazardous area equipment will relay a signal via the MTL-5541 isolator to equipment in the safe area.

1. Apparatus that may be installed in a Non Hazardous Area (Safe Area.)

1.1 MTL 5541 Repeater Power Supply

1.2. The above apparatus is to be supplied from apparatus situated in the safe area which is unspecified except that it must not be supplied from nor contain in normal or abnormal conditions a source of potential with respect to earth in excess of 253 volts r.m.s. or 253 volts d.c.

2. Apparatus that may be installed in a Hazardous Area

2.1 A TraceTek TT-TAR Transducer and either, up to 4 TraceTek TT-FFS Discrete Fuel Sensors or up to 500m of TT-3000, TT-5000, TT-5001 or TT-7000 Sensing cable with optional end of line Mini Probe.

3. Permissible Interconnecting Cables

3.1 The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the hazardous area cables must not exceed the following values:-

4 TT-FFS Fast Fuel Sensors

C µF	L mH	OR	L/R Ratio µH/Ω
0.86	40		469

500m of Sensing Cable including optional Mini Probe

C µF	L µH	OR	L/R Ratio µH/Ω
1.6	40		469

3.2 Wiring to terminals of the safe area apparatus may be achieved by separate cables or by separate circuits within a Type A or Type B multicore cable (as defined in clause 5.3 of EN50 039) subject to the following:-

a. The circuit to be individually screened when used within a Type A multicore cable.
b. The peak voltage of any other circuit within a Type B multicore cable must not exceed 60V.

16 Report Number

See certificate history.

17 Specific Conditions of Use

None.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

New drawings submitted for this issue of certificate.

Number	Sheets	Issue	Date	Description
1012-2535	1 of 1	E	25-FEB-2018	TraceTek TT-TAR System Approval Label

This drawing is common to and held with IECEx BAS 11.0142.

Current drawings also associated with this certificate.

Number	Sheets	Issue	Date	Description
1012-2524	2	D	08-SEP-2014	TT-TAR Apparatus Control Drawing

This drawing is common to and held with IECEx BAS 11.0142.

20 Certificate History

Certificate No.	Date	Comments
Baseefa11Y0277	21 May 2012	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0092/00.
Baseefa11Y0277 – Issue 1	29 October 2014	To permit the addition of alternative sensing cable to be used in the system, types TT-3000 and TT-7000 To permit the addition of an optional end of line low point liquid leak detection probe. To permit modification of the marking label. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR12.0248/00.
Baseefa11Y0277 – Issue 2	17 January 2019	To confirm the certificate is now held in the name of nVent Thermal LLC. To update the product marking label to show the name of nVent Thermal LLC. SGS Baseefa certification report GB/BAS/ExTR18.0123/00 refers.
For drawings applicable to each issue, see original of that issue.		