1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **BAS01ATEX1421X – Issue 2**

4 Equipment or Protective System: **Oxygen Probe Types TOP2 and TOP4**

5 Manufacturer: **Teledyne Analytical Instruments**

6 Address: **16830 Chestnut Street, City of Industry, California 91748 – 1017, USA**

7 This re-issued certificate extends EC – Type Examination Certificate No. BAS01ATEX1421X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to

8 The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa, Notified Body Number 1180, is responsible only for the additional work relating to this re-issued certificate and any other supplementary certificate it has issued.

The examination and test results are recorded in confidential Report No's. **13(C)0550**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2012 EN 60079-11: 2012

except in respect of those requirements listed at item 18 of the Schedule.

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

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

Ⓔx II 1G Ex ia IIC T6 Ga (-20°C ≤ Ta ≤ +40°C)

Baseefa Customer Reference No. **1081**

Project File No. **13/0550**

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R S SINCLAIR
GENERAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number BAS01ATEX1421X – Issue 2**

15 Description of Equipment or Protective System

The TOP2 and TOP4 Oxygen Probes are designed to monitor the percentage of oxygen concentration in the range 0 to 21% v/v in air and other atmospheres.

The Oxygen Probe consists of an electrolytic fuel cell and an encapsulated thermistor assembly, housed in a cylindrical enclosure made of brass, stainless steel or plastic. The plastic enclosure is a possible electrostatic risk and carries an appropriate warning label.

Electrical connections are made via a 2 core (type TOP2) or a 4 core (Type TOP4) cable of length not exceeding 2 metre.

The Oxygen Probe Type TOP4 may be modified to use a sensor adaptor as an alternative method of connecting the cable to the cell assembly. This version of the Oxygen Probe is known as the Type TOP4L.

$P_i = 2.8W$
$C_i = 0$
$L_i = 0$

16 Report Number

13(C)0550

17 Specific Conditions of Use

1. The versions which use a plastic enclosure with exposed metal parts, may present an electrostatic risk; therefore the apparatus must not be installed in a position where it may be subjected to an excessive air/fluid flow that may cause an electrostatic build-up. A suitable warning is included on the certification label.

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	Sheet	Issue	Date	Description
A-37916A	1 of 1	9	10/29/13	Label Detail (ATEX) T.S. Oxygen Probe – TOP 2
A-37916B	1 of 1	9	10/29/13	Label Detail (ATEX) T.S. Oxygen Probe – TOP 4
B-37917	1 of 1	3	11/12/13	Oxygen Probe Type TOP 2
B-37918	1 of 1	5	11/12/13	Oxygen Probe Type TOP 4
C-66354	1 of 1	1	11/12/13	TOP 4L Trace Oxygen Probe Final Assembly
A-67872	1 of 1	3	10/29/13	Label Detail (ATEX) I.S. Oxygen Probe – TOP 4L
A-90882	1 of 1	0	07.10.13	Class INSTA-TRACE Micro Fuel Cell
A-90883	1 of 1	0	07.10.13	Class B2C-XL Micro Fuel Cell
A-90884	1 of 1	0	07.10.13	Class A2C Micro Fuel Cell
A-90885	1 of 1	0	07.10.13	Class INSTA-TRACE XL Micro Fuel Cell
A-90886	1 of 1	0	07.10.13	Class A2CXL INSTA-TRACE Micro Fuel Cell
A-90887	1 of 1	0	07.10.13	Class A2C INSTA-TRACE Micro Fuel Cell
A-90901	1 of 1	0	07.10.13	Class A2C-XL Micro Fuel Cell

Current drawings also associated with this certificate.

Number	Sheet	Issue	Date	Description
A-13882	1 of 1	2	10.21.81	Class B-3 Micro-Fuel Cell (was A4-5538)
A-27430	1 of 1	2	10.21.81	Class B-1 Micro-Fuel Cell (was A4-5541)
A-27471	1 of 1	1	10.21.81	Class A-1 Micro-Fuel Cell (A4-5534)
A-27474	1 of 1	1	10.21.81	Class A-3X Micro-Fuel Cell (A4-5535)
A-27475	1 of 1	1	10.21.81	Class B-2 Micro-Fuel Cell (A4-5540)
A-27476	1 of 1	1	10.21.81	Class C-2 Micro-Fuel Cell (was A4-5537)
A-27477	1 of 1	1	10.21.81	Class B-4 Micro-Fuel Cell (A4-5539)
A-27478	1 of 1	1	10.21.81	Class C-l Micro-Fuel Cell (was A4-5536)
A-27479	1 of 1	1	10.21.81	Class C-3 Micro-Fuel Cell (was A4-5542)
A-27480	1 of 1	1	10.21.81	Class E-l Micro-Fuel Cell (was A4-5543)
A-35786	1 of 1	1	07.12.84	Class A-5 Micro-Fuel Cell (was A4-5545)
A-66201	1 of 1	1	05.28.96	Class L2C Micro-Fuel Cell
A-66613	1 of 1	0	05.28.96	Class L2CI Micro-Fuel Cell
A-66614	1 of 1	0	05.28.96	Class L2CL Micro-Fuel Cell
C-63853	1 to 2	1	11.07.96	Cell Assembly Type TOP4
A-73293	1 to 2	0	12.07.00	PCB Assembly
B-73224	1 to 2	1	12.05.01	Assembly Type TOP2 Model 327RAC, RBC
B-73225	1 to 2	1	12.05.01	Assembly Type TOP2 Model 335X

20 Certificate History

Certificate No.	Date	Comments
BAS01ATEX1421X	20 December 2001	The release of the prime certificate. The associated test and assessment against the requirements of EN 50014: 1997 + Amds 1 & 2; EN 50020: 1994; and EN 50284: 1999 is documented in Test Report No. 01(C)1040.
BAS01ATEX1421X/1	2 September 2005	To permit the use of the equipment in dust. The associated test and assessment against the requirements of EN 61241-0: 2004; and EN 61241-1: 2004 for Ex tD A65 is documented in Test Report No. 05(C)0187.
BAS01ATEX1421X Issue 2	22 November 2013	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN 60079-0: 2012 & EN 60079-11: 2012 including the revision of the equipment marking in accordance with these standards. Note: Dust certification and the corresponding condition of safe use have been removed. The associated test and assessment report is 13(C)0550.
For drawings applicable to each issue, see original of that issue.		