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PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

AO2000 URAS 14
Multigas Continuous Emission Monitor
with SCC-K NO/NO₂ converter
(Previously called Advance Optima URAS 14)

manufactured by:

ABB Automation Products GmbH
Stierstadtstrasse 5
D-60488 Frankfurt-am-Main
Germany

has been assessed by Sira Certification Service
and for the conditions stated on this certificate complies with:

**MCERTS Performance Standards for Continuous Emission
Monitoring Systems Version 2, Revision 1, April 2003**

Certification Ranges :

SO ₂	-	0 to 75 mg/m ³
NO	-	0 to 200 mg/m ³
NO _x	-	0 to 300 mg/m ³ (expressed as NO ₂)
CO	-	0 to 75 mg/m ³
O ₂	-	0 to 25% by volume

Certificate No: Sira MC030018/02
Initial Certification: 01 October 2003
This Certificate Issued: 21 May 2007
Renewal Date: 30 September 2008

Technical Director

MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service

12 Acorn Industrial Park, Crayford Road, Crayford
Dartford, Kent, UK, DA1 4AL
Tel: 01322 520500 Fax: 01322 520501

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Approved Site Application

The instrument is suitable for use on large combustion plant and incineration plant for the ranges specified on page 1 of this certificate.

The field test was carried out over six months with the system mounted on a waste incineration plant.

An additional field test was carried out over three months with the system mounted on a power plant with ABB SCC-K NO₂/NO converter.

The MCERTS certification allows the URAS 14 to be integrated with other ABB products in this series, since they share an electronic control system and sampling system.

Any potential user should ensure, in consultation with the manufacturer, that the emission monitoring system is suitable for the process on which it will be installed. The MCERTS standard gives guidance of process conditions for some other types of plant.

Test Reports

This certification is based on the following Test Reports:

TÜV Munich	URAS 14	Report No. 24016657 dated August 1997
TÜV Munich	Syscon II	Report No. 170608 dated January 2003*
AEA Technology	SCC-K NO _x converter	Report No. MCT/ABB/SCC-K/1 dated 29 April 2005

* Report is evaluation on the Syscon II that is a new controller system that is now used in all analysers in the AO2000 series.

The TÜV reports are accepted on the basis of the Environment Agency's document 'MCERTS – Guidance on the acceptance of German type approval test reports for CEMS' (Feb 2001)

Product certified

This certificate applies to all instruments fitted with software version 2.0.6 onwards (Analyser software) and software version 4.0.1 onwards (Syscon II system software).

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Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: +5°C to +45°C

Performance values are expressed as a percentage of the certification range, except for availability and analysis function, and 'a' indicates compliance with MCERTS requirements.

Test	Results expressed as % of max of certification range				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Linearity	NO, SO ₂ ,		a			<±2%
	CO	a				<±2%
	O ₂	a				<±0.3%/volume
Cross-sensitivity	NO, SO ₂ , CO				a	<±4%
	O ₂	a				<±4%
Temperature dependent zero drift	NO, SO ₂ , CO	a				0.3%/1C
	O ₂	a				0.5%/1C
Temperature dependent span drift	NO, SO ₂ , CO	a				0.3%/1C
	O ₂	a				0.5%/1C
Response times	NO				62s	<200s
	SO ₂				196s	<200s
	CO				61s	<200s
	O ₂				42s	<200s
Detection Limit	SO ₂		a			<5%
	NO, CO	a				<5%
	O ₂	a				<0.2%
Accuracy (analysis function)					>98%	95%/<5%
Availability					98.1%	>95%

* MCERTS performance limit Version 2, Revision 1, April 2003

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Test	Results expressed as % of max of certification range				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Time dependant zero drift						
NO, SO ₂ , CO			a			<2%
O ₂	a					<0.2%
Time dependant span drift						
NO, SO ₂ , CO				a		<4%
O ₂	a					<0.2%
Vibration test					See note 1	Not specified
Maintenance Interval					>1 week	To be stated
Efficiency of NOx converter					97.6%	>95%
Availability of NOx converter					100%	>95%

* MCERTS performance limit Version 2, Revision 1, April 2003

Note 1: There do not appear to be any components in the probe that are likely to be affected by vibration. Hence this test was not carried out.

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Description:

The URAS 14 is a non-dispersive infrared analyser that measures SO₂, NO and CO. The device can measure up to four components plus oxygen, which is measured using an electrochemical sensor.

The system measures NO_x by integrating the ABB SCC-K NO/NO₂ converter, which uses a molybdenum catalyst supported by carbon.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule for certificate No. Sira MC 030018/02.
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
4. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
5. This document remains the property of Sira and shall be returned when requested by the company.

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