

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

Dioxin Emission Continuous Sampling (DECS) Isokinetic Dioxin Sampling system

manufactured by:

ABB S.p.A.
Via L. Lama 33
20099 Sesto S. Giovanni (MI)
Italy

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

**MCERTS Performance Standards and Test Procedures for Automatic
Isokinetic Samplers Version 2 dated September 2005**

Certification Range :

Isokinetic sampling velocity 2 to 20 m/s

Project No: 674/0303
Certificate No: Sira MC 080125/02
Initial Certification: 18 March 2008
This Certificate Issued: 29 June 2012
Renewal Date: 17 March 2013

R Cooper | Eng MInst MC

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: +44 (0)1322 520500 Fax: +44 (0)1322 520501



*This certificate may only be reproduced in its entirety and without change
To authenticate the validity of this certificate please visit www.siracertification.com/mcerts
Registered Office: Rake Lane, Eccleston, Chester, UK CH4 9JN*

Field Test

The Dioxin Emission Continuous Sampling (DECS) system was assessed on the basis of three month field trial mounted on a waste incinerator.

The instrument was tested under the following conditions:

- Approximately 8 tonne/h
- Abatement: denox with NH₃ + sleeve filter with injection of lime and carbon (dry system)
- Combustibles: RSU (Urban Waste)
- Stack Temperature: 150°C
- Stack volumetric flow rate: 300 kNm³/h
- Stack gas velocity: 12-15m/s
- Stack gas humidity: 11-12%vol
- Dust Emission level: under 5mg/m³

Approved Site Application

On the basis of this evaluation this isokinetic sampler is considered by the Environment Agency to be suitable for use for continuous sampling of dioxins, furans, and other persistent organic pollutants (POPs) on any process where the stack conditions are within the performance of the certification range of this instrument.

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.

For general guidance on stack emission monitoring techniques refer to Environment Agency Technical Guidance Note M2: Monitoring of stack emissions to air. This is available on the Agency's website at www.mcerts.net

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

CESI	Report Number: A6032630 dated 11/12/06
CESI	Report Number: 06002702 dated 22/05/06
CESI	Report Number: 06007279 dated December 2006

Certificate No: Sira MC 080125/02
This Certificate Issued: 29 June 2012

*This certificate may only be reproduced in its entirety and without change
To authenticate the validity of this certificate please visit www.siracertification.com/mcerts*

Product Certified

The Dioxin Emission Continuous Sampling (DECS) measuring system consists of the following parts:

- Heated probe mounted in the stack (with a Pitot tube to measure the velocity of the flue gas)
- Sampling unit installed on a platform on the stack
- Control unit that is installed in control room

This certificate applies to all instruments fitted with software version 1.0.3 onwards (serial number 3.CU001.8 onwards for control unit & 3.SU001.8 onwards for sampling units).

Certificate No: Sira MC 080125/02
This Certificate Issued: 29 June 2012

*This certificate may only be reproduced in its entirety and without change
To authenticate the validity of this certificate please visit www.siracertification.com/mcerts*

Certified Performance

Performance values are expressed as a percentage of measured value.

Test	Results expressed as % of measured value				Other results	MCERTS* specification
	<0.5	<1	<2	<5		
Accuracy of isokinetic sampling rate response to changes in flue gas velocity				4.6		±5%
Accuracy of determination of volume of gas sampled			1.44			±2%
Linearity of isokinetic sampling rate		1.5				±5%
Response time T ₉₀ (seconds)					75 s	<100 s
Flow repeatability under laboratory conditions				4.5		±5%
Minimum operational velocity					1.97 m/s	2 m/s
Short term drift			1.7			±2%
Accuracy of the determination of volume of gas sampled calculated as an average of ten runs performed during the first and the last month of testing		1.0				±5%
Flow reproducibility under field conditions calculated from ten independent measurement results at one fixed location within the duct	0.5					±5%
Availability over three months continuous use					100%	>95%

Certificate No: Sira MC 080125/02
 This Certificate Issued: 29 June 2012

*This certificate may only be reproduced in its entirety and without change
 To authenticate the validity of this certificate please visit www.siracertification.com/mcerts*

Description:

The DECS or 'Dioxin Emission Continuous Sampler' is an emission sampling system which is based on the automatic isokinetically controlled sampling of the flue gas. The system can be used for long term measurement of Dioxins, Furans and other POP's.

For measurement of dioxins the system uses the filter condenser method with adsorbing trap on the wet gas in accordance to EN1948-1.

The system consists of two main components:

- Sampling unit, with heated probe and Pitot tube to measure the stack gas velocity, mounted on the stack at sampling point platform.
- Control unit that is installed in control room

The two units are connected via a sampling line, power and measuring cables. Each control unit can have up to 4 sampling units connected.

The manufacturer states the temperature range for the equipment is as follows:

- Sampling unit located outside the stack: -15°C to +45°C
- In stack probe: up to 350°C
- Control unit: 0 to 40°C

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 080124/03.
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. 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'.
4. This document remains the property of Sira and shall be returned when requested by the company.

Certificate No: Sira MC 080125/02
This Certificate Issued: 29 June 2012

*This certificate may only be reproduced in its entirety and without change
To authenticate the validity of this certificate please visit www.siracertification.com/mcerts*