PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

RM 210 Dust Concentration Monitor

manufactured by:

SICK MAIHAK GmbH
Nimburger Straße 11
79276 Reute
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 :

Particulate Concentration: 0 to 5 mg/m^3
0 to 15 mg/m^3
0 to 150 mg/m^3

Project No:	674/0113A
Certificate No:	Sira MC 040043/01
Initial Certification:	10 August 2004
This Certificate Issued:	08 August 2007
Renewal Date:	09 August 2009

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

Certified Performance

The instrument was evaluated for use under the following conditions:
Ambient Temperature Range: -20°C to +55°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 certification range				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Linearity		a				<±2%
Temperature dependent zero drift	a					<0.3%
Temperature dependent span drift	a					<0.3%
Response time					See note 1	<200s
Detection limit	a				See note 2	<5%
Accuracy/Analysis function (field)					>90% - -	>90% (<20mg/m^3) >95% (>20mg/m^3)
Integral performance					7,6% - -	<20% (<20mg/m^3) <10% (>20mg/m^3)
Availability (field)					95,8%	>95%
Voltage effect, at ±15% from the norm	a					<2%
Zero shift (weekly) (field)	a				- -	< 3% (<20mg/m^3) <2% (>20mg/m^3)
Span shift (weekly) (field)	a				- -	< 3% (<20mg/m^3) <2% (>20mg/m^3)

* MCERTS performance limit Version 2 Revision 1, April 2003 2003 Specification given is for range <20mg/m³

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Test	Results expressed as % of certification range				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Reproducibility					44 -	> 30 (<20mg/m^3) >50 (>20mg/m^3)
Vibration test					See note 3	Not specified
Sample gas pressure					See note 4	To be reported
Sample gas temperature					See note 4	To be reported
Maintenance Interval					≥ 4 weeks	To be reported

* MCERTS performance limit Version 2 Revision 1, April 2003 Specification given is for range <20mg/m³

Note 1: The response time of the monitors is adjustable between 1 and 255 seconds. Standard setting for the response time is 60 s that easily fulfils the requirement.

Note 2: The detection limit is presented as % of the smallest certification range.

Note 3: A visual examination did not identify any components in the probe that are likely to be affected by vibration. Hence the test was not carried out. Also the field test results from different types of plants have shown that typical vibrations on site have no influence to the measuring signal of these instruments.

Note 4: The RM210 in situ analyser measures the dust concentration directly within the stack in operating conditions.

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Field Test Site

The RM 210 analyser was assessed on the basis of a five month trial mounted on a waste incinerator on both 0-5mg/m^3 and 0-15mg/m^3 ranges.

Approved Site Application

On the basis of these tests this certificate is valid when the instrument is used on waste incineration and large coal-fired combustion plant applications.

The monitor is suited for monitoring extremely low to medium dust concentration or soot values (e.g. toxic dust limit values), i.e. power plant and steel, cement, asbestos and food industries.

However 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.

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:

TÜV Essen Report No: 352/0855/93-58 32 07/01 dated 14th September 1995

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' Version 2 (October 2003)

Product Certified

The tested system RM210 consists of the main components:

- Transceiver unit: RM210-M
- The electronic connection unit RM210-A
- The light trap
- The air purge unit

The software status certified is version 28.0 onwards.

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Description:

RM 210 is an analyser for the measurement of extremely low to medium dust concentrations in various application processes. The dust concentration monitor operators according to the scattered-light principle. Its adjustable measurement allows representative measurement to be conducted in small and in large duct diameters.

During the automatic zero point and span check cycle a contamination measurement of all optical components is accomplished and corrects the measurement values automatically.

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 040043/01.

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.

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