

Rapporto Conclusivo della Attività di Controllo Ordinario – Anno 2017

**ATTIVITÀ ISPETTIVA AI SENSI DEL D.LGS. n.152/2006 e s.m.i.
(art.29-decies)**

Stabilimento

Acciaieria Arvedi S.p.A.

Trieste

Decreto AIA n. 96 dd. 27/01/2016

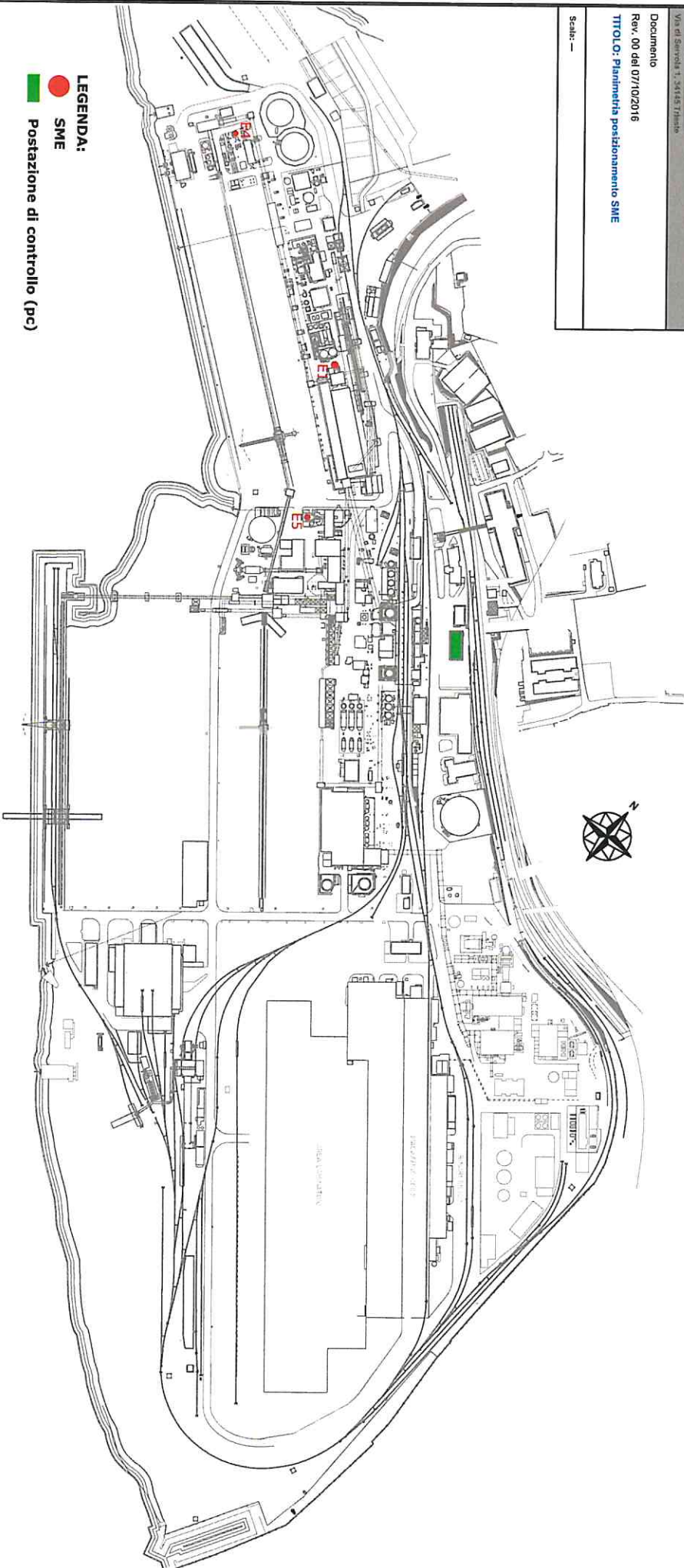


Allegato 6

Verifica gestione SME

14/06/2018

LEGENDA:
● SME
■ Postazione di controllo (pc)



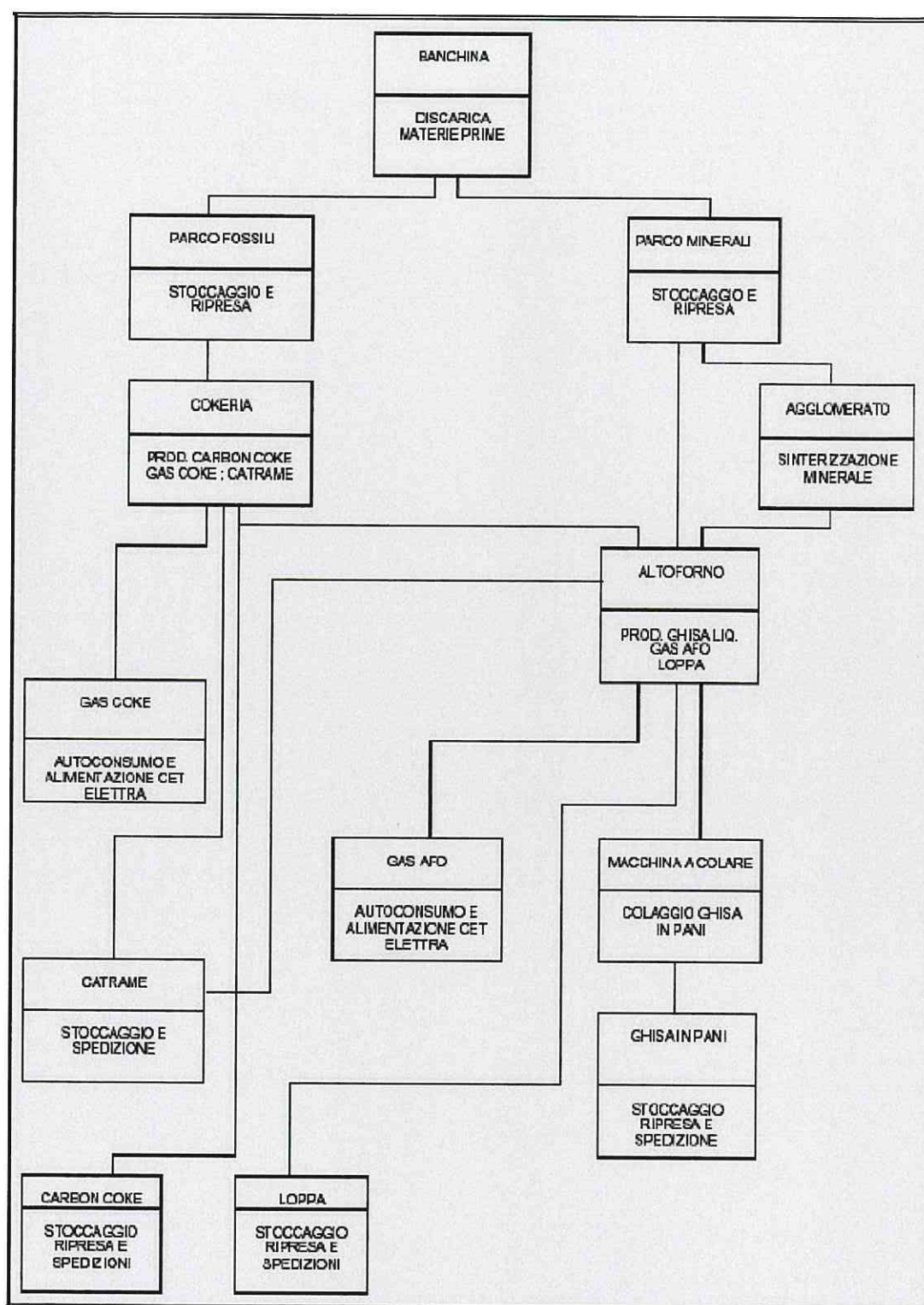


Figura 4 – Schema a blocchi delle linee di produzione dello stabilimento

CERTIFICATE

of Product Conformity (QAL1)

Certificate No.: 0000035005_01

Certified AMS: Endura AZ20 for O₂

Manufacturer: ABB Limited
Oldens Lane
Stonehouse
Gloucestershire
England

Test Institute: TÜV Rheinland Energy GmbH

**This is to certify that the AMS has been tested and certified
according to the standards**

**EN 15267-1 (2009), EN 15267-2 (2009), EN 15267-3 (2007)
and EN 14181 (2004)**

Certification is awarded in respect of the conditions stated in this certificate
(this certificate contains 6 pages).



Suitability Tested
EN 15267
QAL1 Certified
Regular
Surveillance

www.tuv.com
ID 0000035005

Publication in the German Federal Gazette
(BAnz.) of 02 March 2012

German Federal Environment Agency
Dessau, 28 February 2017



Dr. Marcel Langner
Head of Section II 4.1

This certificate will expire on:
01 March 2022

TÜV Rheinland Energy GmbH
Cologne, 27 February 2017



ppa. Dr. Peter Wilbring

www.umwelt-tuv.eu
tre@umwelt-tuv.eu
Tel. + 49 221 806-5200

TÜV Rheinland Energy GmbH
Am Grauen Stein
51105 Köln

Test institute accredited to EN ISO/IEC 17025:2005 by DAkkS (German Accreditation Body).
This accreditation is limited to the accreditation scope defined in the enclosure to the certificate D-PL-11120-02-00

Test report: 936/21213673/A of 10 October 2011
Initial certification: 02 March 2012
Expiry date: 01 March 2022
Certificate: renewal (previous certificate 0000035005 dated from 16 March 2012 with validity up to the 01 March 2017)
Publication: BAnz. 02 March 2012, No. 36, p. 920, chapter II, No. 1.1

Approved application

The tested AMS is suitable for use at combustion plants according to Directive 2010/75/EU, chapter III (13. BImSchV), at waste incineration plants according to Directive 2010/75/EU, chapter IV (17. BImSchV) and other plants requiring official approval. The measured ranges have been selected considering the wide application range of the AMS.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a three months field test at a waste incineration plant.

The AMS is approved for an ambient temperature range of -20 °C to +50 °C.

The notification of suitability of the AMS, performance testing, and the uncertainty calculation have been effected on the basis of the regulations valid at the time of performance testing. As changes in legal regulations are possible, any potential user should ensure that this AMS is suitable for monitoring the Oxygen concentration relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the installation at which it will be installed.

Basis of the certification

This certification is based on:

- test report 936/21213673/A of 10 October 2011 of TÜV Rheinland Energie und Umwelt GmbH
- suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- the ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz. 02 March 2012, No. 36, p. 920, chapter II, No. 1.1,
Announcement by UBA from 23 February 2012:

AMS name:Endura AZ20 for O₂**Manufacturer:**

ABB Limited, Oldens Lane, Stonehouse, Gloucestershire, England

Field of application:For measurements at plants requiring official approval and
plants according to 27th BImSchV**Measuring ranges during the suitability test:**

Component	Certification range	Supplementary measurement ranges	Unit
O ₂	0 - 25	0 - 5	Vol.-%

Software version:

2000.01.15

Restrictions:

None

Notes:

A four weeks period has been specified as maintenance interval.

Test report:TÜV Rheinland Energie und Umwelt GmbH, Cologne
Report-No.: 936/21213673/A dated 10 October 2011

Certified product

This certificate applies to automated measurement systems conforming to the following description:

The Endura AZ20 probe's zirconia cell is a thimble-shaped sensing element fitted with inner and outer electrodes at its closed end. The inner electrode is exposed to the flue gas entering the open end of the cell; the outer electrode is supplied with reference air from a pump or regulator and is therefore exposed to a constant partial pressure of oxygen (20.95 % O₂). The cell is held at a constant 700 °C by a heater and control thermocouple.

Two different models of the measuring system were tested:

- Probe with directly attached measuring transmitter and external pump for reference air.

- Probe with external measuring transmitter and external pump for reference air.

Gas is directly emitted with one bar pre-pressure by the gas bottle. The systems have an internal regulator which guarantees a constant gas flow.

The software version is: 2000.01.15.

General notes

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. 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 systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate. This can be applied to the product or used in publicity material for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: [**qal1.de**](http://qal1.de).

Certification of Endura AZ20 for O₂ is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

Initial certification according to EN 15267

Certificate No. 0000035005: 16 March 2012
Expiry date of the certificate: 01 March 2017

Test report: 936/21213673/A of 10 October 2011
TÜV Rheinland Energie und Umwelt GmbH, Cologne
Publication: BAnz. 02 March 2012, No. 36, p. 920, chapter II, No. 1.1
Announcement by UBA from 23 February 2012

Renewal of the certificate

Certificate No. 0000035005_01: 28 February 2017
Expiry date of the certificate: 01 March 2022

Calculation of overall uncertainty according to EN 14181 and EN 15267-3

Measuring system

Manufacturer	ABB Limited
Name of measuring system	Endura AZ 20
Serial number of the candidates	3K220000048375 / 3K220000048374/ 3K220000048388 / 3K220000048389
Measuring principle	Zirkondioxid

Test report

Test laboratory	TÜV Rheinland
Date of report	2011-10-10

Measured component

Certification range	O ₂ 0 - 25 Vol.-%
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Evaluation of the cross sensitivity (CS)

(system with largest CS)

Sum of positive CS at zero point	0.00 Vol.-%
Sum of negative CS at zero point	0.00 Vol.-%
Sum of positive CS at reference point	0.00 Vol.-%
Sum of negative CS at reference point	-0.23 Vol.-%
Maximum sum of cross sensitivities	-0.23 Vol.-%
Uncertainty of cross sensitivity	-0.133 Vol.-%

Calculation of the combined standard uncertainty

Tested parameter

	u	u ²
Standard deviation from paired measurements under field conditions *	u _D 0.097 Vol.-%	0.009 (Vol.-%) ²
Lack of fit	u _{lof} 0.052 Vol.-%	0.003 (Vol.-%) ²
Zero drift from field test	u _{d,z} 0.090 Vol.-%	0.008 (Vol.-%) ²
Span drift from field test	u _{d,s} 0.110 Vol.-%	0.012 (Vol.-%) ²
Influence of ambient temperature at span	u _t 0.081 Vol.-%	0.007 (Vol.-%) ²
Influence of supply voltage	u _v 0.040 Vol.-%	0.002 (Vol.-%) ²
Cross sensitivity (interference)	u _i -0.133 Vol.-%	0.018 (Vol.-%) ²
Influence of sample pressure	u _p 0.100 Vol.-%	0.010 (Vol.-%) ²
Uncertainty of reference material at 70% of certification range	u _{rm} 0.202 Vol.-%	0.041 (Vol.-%) ²

* The larger value is used :

"Repeatability standard deviation at span" or

"Standard deviation from paired measurements under field conditions"

Combined standard uncertainty (u_c)

$$u_c = \sqrt{\sum (u_{\max,j})^2} \quad 0.33 \text{ Vol.-%}$$

Total expanded uncertainty

$$U = u_c \cdot k = u_c \cdot 1.96 \quad 0.65 \text{ Vol.-%}$$

Relative total expanded uncertainty

Requirement of 2000/76/EC and 2001/80/EC

Requirement of EN 15267-3

U in % of the range 25 Vol.-%	2.6
U in % of the range 25 Vol.-%	10.0 **
U in % of the range 25 Vol.-%	7.5

** For this component no requirements in the EC-directives 2001/80/EG und 2000/76/EG are given.
A value of 10,0 % was used for this.

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

Advance CEMAS FTIR – NT (ACF-NT)
Multigas Continuous Emission Monitoring System

manufactured by:

ABB Automation GmbH

Stierstaedter Strasse 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 3.4 dated July 2012,
EN15267-1:2009, EN15267-2:2009, EN15267-3:2007,
& QAL 1 as defined in EN 14181: 2004

Certification Ranges :

CO	-	0 to 75 mg/m ³	0 to 300 mg/m ³	
NO	-	0 to 200 mg/m ³	0 to 400 mg/m ³	
SO ₂	-	0 to 75 mg/m ³	0 to 300 mg/m ³	
HCl	-	0 to 15 mg/m ³		
NH ₃	-	0 to 15 mg/m ³		
H ₂ O	-	0 to 40 %Vol		
HF	-	0 to 5 mg/m ³	0 to 10 mg/m ³	
O ₂	-	0 to 25 %Vol	0 to 12 %Vol	0 to 6 %Vol
TOC	-	0 to 15 mg/m ³		

Project No.: 673/0348
Certificate No: Sira MC030016/09
Initial Certification: 01 October 2003
This Certificate issued: 20 May 2013
Renewal Date: 19 May 2018

R Cooper I Eng MInst MC
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: +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

Approved Site Application

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. Operators with installations falling under the Large Combustion Plant Directive or Waste Incineration Directive must refer to Technical Guidance Note M20: Quality Assurance of Continuous Emission Monitoring Systems, for guidance on the suitability of CEMS for their installations. M2 and M20 are available on the Agency's website at www.mcerts.net

On the basis of the assessment and the ranges required for compliance with EU Directives this instrument is considered suitable for use on waste incineration and large coal-fired combustion plant applications. This CEM has been proven suitable for its measuring task (parameter and composition of the flue gas) by use of the QAL 1 procedure specified in EN14181, for LCPD and WID applications for the ranges specified. The lowest certified range for each determinand shall not be more than 1.5X the emission limit value (ELV) for WID applications, and not more than 2.5X the ELV for LCPD and other types of application.

The field trial was performed over time intervals between 3 months and more than one year with the ACF-NT installed on a municipal waste incinerator. Both H₂ only and H₂/He mix (40% / 60%) fuel types were used during the field test.

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:

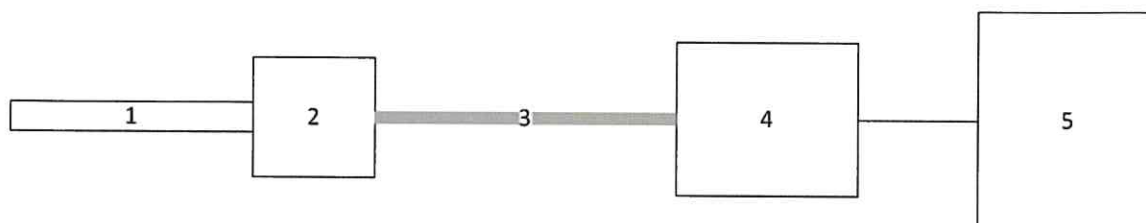
TÜV Rhineland	Report No. 936/801003/A dated 01.10.2001
TÜV Rhineland	Report No. 936/801003/B supplementary report for HF dated 16.10.2001
TÜV Rhineland	Report No. 936/801003/C supplementary report for O ₂ dated 18.01.2002
TÜV Rhineland	Report No. 936/21204160/A dated 21.12.05
TUV Rhineland	Report No. 936/21210471/A dated 13.02.2009

Certificate No: Sira MC030016/09
This Certificate Issued: 20 May 2013

*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 measuring system consists of the following parts:



1. Sample Probe	2. Heated Filter	3. Heated Sample Line	4. Gas Conditioning	5. Analyser
Model: PFE2	Model: ceramic filter, pore size <0.3µm	Model: TBL01-S Length: 18m	Model: SC-Block integrated	Model: ACF-NT

Allowable variations could include:

- A different brand or model of sampling system of the same type, provided that there is evidence the alternative system works with similar types of CEM.
- Additional manifolds and heated valves used to allow more than one analyser to share a sampling system.
- FID analyser (optional)
- ZrO₂ analyser (optional)

This certificate applies to all instruments fitted with software version 2.10 onwards (Syscon I system software) and software version 3.0.2 & 3.06 onwards (Syscon II system software)

Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: +5°C to +40°C

Instrument IP rating: IP54

Note: If the instrument is supplied with an enclosure then the ambient temperature shall be monitored inside the enclosure to ensure that it stays within the above ambient temperature range.

Unless otherwise stated the evaluation was carried out on the certification range CO 0 to 75mg/m³, NO 0 to 200 mg/m³, SO₂ 0 to 75mg/m³, HCl 0 to 15 mg/m³, NH₃ 0 to 15 mg/m³, H₂O 0 to 40%vol, O₂ 0 to 25%vol

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Response time						
CO					136s	<200s
NO					147s	<200s
SO ₂					144s	<200s
HCl					151s	<400s
NH ₃					143s	<400s
H ₂ O					140s	<200s
HF					256s	<400s
O ₂					13s	<200s
TOC					33s	<200s
Repeatability standard deviation at zero point						
CO	0.17					<2.0%
NO		0.56				<2.0%
SO ₂	0.45					<2.0%
HCl		0.53				<2.0%
NH ₃			1.13			<2.0%
H ₂ O	0.13					<2.0%
HF		1.00				<2.0%
O ₂	0.04					<0.2%
TOC	0.07					<2.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Repeatability standard deviation at span point						
CO	0.24					<2.0%
NO	0.46					<2.0%
SO ₂	0.37					<2.0%
HCl		0.93				<2.0%
NH ₃		0.87				<2.0%
H ₂ O	0.23					<2.0%
HF			1.80			<2.0%
O ₂	0.20					<0.2%
TOC		1.00				<2.0%
Lack-of-fit						
CO		0.8				<2.0%
CO 0 to 300 mg/m ³	0.3					<2.0%
NO	-0.4					<2.0%
NO 0 to 400 mg/m ³	0.4					<2.0%
SO ₂		-0.6				<2.0%
SO ₂ 0 to 300 mg/m ³		0.6				<2.0%
HCl		-0.8				<2.0%
HCl 0 to 90 mg/m ³			1.3			<2.0%
NH ₃			1.2			<2.0%
H ₂ O		-0.9				<2.0%
HF			-1.9			<2.0%
HF 0 to 10 mg/m ³			-1.7			<2.0%
O ₂	-0.1					<0.2%
O ₂ 0 to 12%vol	0.14					<0.2%
O ₂ 0 to 6%vol	0.02					<0.2%
TOC	0.1					<2.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Influence of ambient temperature zero point						
CO		0.8				<5.0%
NO		0.8				<5.0%
SO ₂			-2.0			<5.0%
HCl			-1.4			<5.0%
NH ₃				2.1		<5.0%
H ₂ O	0.4					<5.0%
HF				-2.4		<5.0%
O ₂	-0.08					<0.5%
TOC		1.0				<5.0%
Influence of ambient temperature span point						
CO			1.7			<5.0%
NO				2.3		<5.0%
SO ₂			-1.1			<5.0%
HCl				-3.0		<5.0%
NH ₃				3.7		<5.0%
H ₂ O				-2.6		<5.0%
HF				4.0		<5.0%
O ₂	-0.26					<0.5%
TOC			1.3			<5.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Influence of sample gas flow for extractive CEMS					Note 1	
CO, SO ₂ , HCl, NH ₃ , H ₂ O						<2.0%
NO, O ₂	0.00					<2.0%
HF			-1.4			<2.0%
TOC	<1.0					<2.0%
Influence of voltage variations 190 to 250V						<2.0%
CO	0.3					
NO	0.3					<2.0%
SO ₂	0.1					<2.0%
HCl	-0.5					<2.0%
NH ₃	-0.5					<2.0%
H ₂ O	0.5					<2.0%
HF		0.8				<2.0%
O ₂					Note 2	<0.2%
TOC					Note 2	<2.0%
Influence of vibration (10 to 60Hz (±0.3mm), 60 to 150Hz at 19.6m/s ²)					Not tested Note 3	To be reported
Cross-sensitivity at zero					Note 4	
CO			-1.7			<4.0%
NO				2.8		<4.0%
SO ₂				-3.5		<4.0%
HCl			-1.6			<4.0%
NH ₃				-3.6		<4.0%
H ₂ O	<0.5					<4.0%
HF				-4.0		<4.0%
O ₂	<0.02					<0.4%
TOC			1.8			<4.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Cross-sensitivity at span					Note 4	
CO				-3.7		<4.0%
NO				2.2		<4.0%
SO ₂				3.6		<4.0%
HCl				2.6		<4.0%
NH ₃				2.4		<4.0%
H ₂ O	<0.5					<4.0%
HF				-4.0		<4.0%
O ₂	<0.02					<0.40%
TOC				3.4		<4.0%
Effect of oxygen for TOC CEMS	-0.5					<2.0%
Response factors for TOC CEMS						
Methane					1.09	0.9 to 1.2
Aliphatic Hydrocarbons (cyclohexane)					1.02	0.9 to 1.1
Aromatic Hydrocarbons (toluene)					0.96	0.8 to 1.1
Dichloromethane (tetrachlorethene)					0.97	0.75 to 1.15
Aliphatic alcohols (Isopropanol)					0.74	0.7 to 1.0
Ester and keytones (acetone)					0.71	0.7 to 1.0
Organic acids					Not tested	0.5 to 1.0

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Measurement uncertainty						
CO (ELV 50 mg/m ³)					9.8% (Note 5)	7.5%
NO (ELV 130 mg/m ³)					8.2%	15%
SO ₂ (ELV 50 mg/m ³)					10.0%	15%
HCl (ELV 10 mg/m ³)					11.8%	30%
NH ₃ (ELV 10 mg/m ³)					12.5%	15%
H ₂ O (range 40 Vol%)					4.2%	7.5%
HF (ELV 2 mg/m ³)					31.5% (Note 5)	30%
O ₂ (range 25Vol%)					2.4%	7.5%
TOC (ELV 10 mg/m ³)					18.2%	22.5%
Calibration function (field)						
CO					0.99	>0.90
NO					0.99	>0.90
SO ₂					0.99	>0.90
HCl					0.99	>0.90
NH ₃					0.99	>0.90
H ₂ O					0.99	>0.90
HF					0.96	>0.90
O ₂					0.99	>0.90
TOC					0.98	>0.90

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Response time (field)						
CO					178s	<200s
NO					182s	<200s
SO ₂					198s	<200s
HCl					196s	<400s
NH ₃					192s	<400s
H ₂ O					190s	<200s
HF					187s	<400s
O ₂					<120s	<200s
TOC					<120s	<200s
Lack of fit (field)						
CO	0.3					<2.0%
NO	0.5					<2.0%
SO ₂		-0.7				<2.0%
HCl			1.2			<2.0%
NH ₃		0.9				<2.0%
H ₂ O		-0.6				<2.0%
HF			-2.0			<2.0%
O ₂		-0.7				<0.2%
TOC		0.6				<2.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Maintenance interval						>8 days
CO, NO, SO ₂ , HCl, NH ₃ , H ₂ O					6 months	>8 days
HF					3 months	>8 days
O ₂					1 month	>8 days
TOC					2 weeks	>8 days
Zero and Span drift requirement	<p><u>Statement from Manufacturer:</u></p> <p>ACF-NT A twice daily zero calibration is carried out automatically using purified air. A verification of the span point is required only every six months.</p> <p>RGM11 (Optional) The analyser is checked for zero and span drift on the 1st day of every month using air. Zero-point calibration takes place using air. Span-point calibration takes place using a mixture of oxygen in nitrogen. Automatic calibration is possible via built-in zero gas and test gas valves.</p> <p>MultiFID14 (Optional) The analyser is checked for zero and span drift every 14 days using test gases. Zero-point calibration takes place using air or nitrogen. Span-point calibration takes place using propane or another hydrocarbon in air or nitrogen. Automatic calibration is possible via built-in zero gas and test gas valves.</p>					
Change in zero point over maintenance interval						
CO		-0.9				<3.0%
NO		0.9				<3.0%
SO ₂			1.1			<3.0%
HCl			1.7			<3.0%
NH ₃			1.2			<3.0%
H ₂ O	0.1					<3.0%
HF				3.0		<3.0%
O ₂	0.15					<0.2%
TOC				2.3		<3.0%

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Change in span point over maintenance interval						
CO				-2.7		<3.0%
NO			1.6			<3.0%
SO ₂			-1.9			<3.0%
HCl				-2.7		<3.0%
NH ₃				3.0		<3.0%
H ₂ O			-1.5			<3.0%
HF				2.6		<3.0%
O ₂	0.20					<0.2%
TOC				2.8		<3.0%
Availability						
CO, NO, SO ₂ , HCl, NH ₃ , H ₂ O					98.2%	>95%
HF					97.1%	>95%
O ₂ , TOC					99.4%	>98% for O ₂
Reproducibility						
CO				2.4		<3.3%
NO			1.4			<3.3%
SO ₂				3.2		<3.3%
HCl			1.4			<3.3%
NH ₃			1.5			<3.3%
H ₂ O				2.9		<3.3%
HF				3.2		<3.3%
O ₂	0.06					<0.20%
TOC			1.9			<3.3%

- Note 1 The sample gas flow test has been performed for O₂, HF, NO and TOC. O₂ and TOC have been tested as different sensors are used. NO has been tested as it is a standard measurement, and HF tested as it is deemed the most difficult component of the FT-IR measurement.
- Note 2 For TOC and O₂ no relevant influence on reading due to voltage variations was detected by the test house, but the readings were not recorded.
- Note 3 The measuring system was not tested against vibration as it is an extractive analyser.
- Note 4 Interferents used for cross sensitivity: O₂, H₂O, CO, CO₂, CH₄, N₂O, NO, NO₂, NH₂, NH₃, SO₂, HCl
- Note 5 The measurement uncertainty result for CO and HF does not meet the requirements of EN-15267-3: 'at least 25% below max permissible uncertainty', but does meet the requirements of the EC directives 2000/76/EC (WID) and 2001/80/EC (LCPD).

Description:

The ABB Advance Cemas FTIR-NT (ACF-NT) system is a hot/wet extractive multigas analyser using Fourier Transform Infrared (FTIR) analysis to measure several gaseous components (including water).

The RGM 11 which is a zirconia-sensor based monitoring system for oxygen, and the AO2000-MultiFID14 which is a flame ionisation detector measuring total content of organic carbon, can be optionally integrated.

The loss-free measurement of the lowest concentrations of water-soluble components is achieved by seamless heating of the system to 180°C – from the probe filter element to the analyzer.

A low-maintenance electronically controlled air injector system conveys the sample gas from the chimney stack to the analyzers at constant pressure. In order to avoid pressure dependencies, which could arise if an uncontrolled feed pump were used, no moving parts are employed.

Measurements at very high moisture content are possible using a chemometric model optimized for waste incineration processes.

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 MC030016/05
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.