CERTIFICATE

of Product Conformity (QAL1)

Certificate No.: 0000033596_02

AMS designation:	AMESA-D long-term sampling of dioxins/furans
Manufacturer:	ENVEA Deutschland Benzstraße 11 61352 Bad Homburg Germany
Test Laboratory:	TÜV Rheinland Energy GmbH

This is to certify that the AMS has been tested and found to comply with: Uniform Practice in monitoring emissions* and EN 15267-1 (2009) and EN 15267-2 (2009)

Certification is awarded in respect of the conditions stated in this certificate (this certificate contains 7 pages).
The present certificate replaces certificate 0000033596_01 of 1 April 2019.

Suitability Tested
EN 15267
QAL1 Certified
Regular Surveillance

www.tuv.com
ID 0000033596

Publication in the German Federal Gazette (BAnz) of 01 April 2014

This certificate will expire on:
30 June 2025

German Federal Environment Agency
Dessau, 01 July 2020

Dr. Marcel Langner
Head of Section II 4.1

TÜV Rheinland Energy GmbH
Cologne, 30 June 2020

ppa. Dr. Peter Wilbring

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51105 Köln

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

*Uniform practice in monitoring emissions
- Circular from the Federal Environment Ministry of June 13, 2005 - IG I 2 - 45053/5 - and August 4, 2010 - IG I 2-51134/0

Test Report:	936/21221445/A dated 09 October 2013
Initial certification:	01 April 2014
Expiry date:	30 June 2025
Certificate:	Renewal (of previous certificate 0000033596_01 dated 01 April 2019 valid until 30 June 2020)
Publication:	BAnz AT 01.04.2014 B12, chapter III number 1.1

Approved application
The tested long term sampling system is suitable for use for continuous sampling of dioxins and furans. The measured ranges have been selected so as to ensure as broad a field of application as possible.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a fourteen-month field test at two waste incinerators.

The AMS is approved for an ambient temperature range of +5 °C to +40 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the intended purpose.

Basis of the certification
This certification is based on:

- Test report no. 936/21221445/A dated 09 October 2013 issued by 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 AT 01.04.2014 B12, chapter III number 1.1, UBA announcement dated 27 February 2014 :

AMS designation:
AMESA-D long-term sampling of dioxins/furans

Manufacturer:
ENVEA Deutschland, Bad Homburg

Field of application:
Continuous sampling of dioxins/furans

Measuring ranges during performance testing:

Velocity	1.1 - 30	m/s
Dioxine*	up to 0.5	ng/m³ TEQ

*with 260 m³ flue gas to 70 g XAD-2

Software version:
P86.017.0

Restriction:
The performance criterion as related to losses during sampling was not fulfilled in the 6-hour comparison measurements. Therefore, the probe tube shall be rinsed before and after the comparison measurements and the result of the analysis of the rinsing solution after measurement shall be added to the analysed value.

Note:
The integrated velocity measuring system cannot be used in saturated exhaust gas.

Test Report:
TÜV Rheinland Energie und Umwelt GmbH, Cologne
Report no.: 936/21221445/A dated 09 October 2013

Publication in the German Federal Gazette: BAnz AT 26.08.2015 B4, chapter V notification 22, UBA announcement dated 22 July 2015:

22 Notification as regards Federal Environment Agency (UBA) notice of 27 February 2014 (BAnz AT 01.04.2014 B12, chapter III number 1.1)

The latest software version of the AMESA-D long-term sampling system for dioxins/furans manufactured by Environnement S.A. Deutschland is:
P86.019.9

Statement issued by TÜV Rheinland Energie und Umwelt GmbH
dated 25 March 2015

Publication in the German Federal Gazette: BAnz AT 01.08.2016 B11, chapter V notification 4, UBA announcement dated 14 July 2016:

4 Notification as regards Federal Environment Agency (UBA) notices of 27 February 2014 (BAnz AT 01.04.2014 B12, chapter III number 1.1) and of 22 July 2015 (BAnz AT 26.08.2015 B4, chapter V 22nd notification)

The latest software version of the AMESA-D long-term sampling system for dioxins/furans manufactured by Environnement S.A. Deutschland is:
P86.020.1

The QUINT-PS-100-240AC/24DC/10-2938604 10A power supply used to date will be replaced by Model QUINT-PS/1AC/24DC/10-2866763.
The QUINT-PS-100-240AC/24DC/2.5-2938578 2.5A power supply used to data will be replaced by Model QUINT-PS/1AC/24DC/3.5-2866747.

Statement issued by TÜV Rheinland Energie und Umwelt GmbH
dated 28 February 2016

Publication in the German Federal Gazette: BAnz AT 31.07.2017 B12, chapter II notification 15, UBA announcement dated 13 July 2017:

15 Notification as regards Federal Environment Agency (UBA) notices of 27 February 2014 (BAnz AT 01.04.2014 B12, chapter III number 1.1) and of 14 July 2016 (BAnz AT 01.08.2016 B11, chapter V 4th notification)

The latest software version of the AMESA-D long-term sampling system for dioxins/furans manufactured by Environnement S.A. Deutschland is:
P86.020.6

The type Hitachi L200 frequency converter will be replaced by the successor model Hitachi WL200.

Statement issued by TÜV Rheinland Energy GmbH dated 5 January 2017

Publication in the German Federal Gazette: BAnz AT 17.07.2018 B9, chapter III notification 11, UBA announcement dated 03 July 2018:

11 Notification as regards Federal Environment Agency (UBA) notices of 27 February 2014 (BAnz AT 01.04.2014 B12, chapter III number 1.1) and of 13 July 2017 (BAnz AT 31.07.2017 B12, chapter II 15th notification)

The latest software version of the AMESA-D long-term sampling system for dioxins/furans manufactured by Environnement S.A. Deutschland is:
P86.020.7

The peristaltic pump, type SP04 G/1, manufactured by Bühler Technologies used so far for discharging condensate will be replace by a CP-Single pump manufactured by Bühler Technologies.

Statement issued by TÜV Rheinland Energy GmbH dated 20 February 2018

Publication in the German Federal Gazette: BAnz AT 22.07.2019 B8, chapter V notification 3, UBA announcement dated 28 June 2019:

3 Notification as regards Federal Environment Agency (UBA) notices of 27 February 2014 (BAnz AT 01.04.2014 B12, chapter III number 1.1) and of 13 July 2017 (BAnz AT 31.07.2017 B12, chapter II 15th notification)

The company name has changed from Environnement S.A. Deutschland to ENVEA Deutschland. The latest software version of the AMESA-D long-term sampling system for dioxins/furans manufactured by ENVEA Deutschland is:
P86.021.2
In addition to this version, the following intermediate version are also valid:
P86.020.8, P86.020.9, P86.021.0, P86.021.1

Statement issued by TÜV Rheinland Energy GmbH dated 6 March 2019

Certified product
This certification applies to automated measurement systems conforming to the following description:

The AMESA-D dioxin/furan monitoring system isokinetically samples a partial flow of the flue gas. Dioxins and furans are adsorbed on a replaceable cartridge filled with adsorber resin.

AMESA-D is fully automatic and saves all necessary data internally. The data can be transferred to a USB stick using an USB interface. Data transfer is also possible via internet.

The amount of dioxins/furans (PCDD/PCDF) over the variable period of 4 hours to 6 weeks is determined in an accredited laboratory.

The AMESA D system comprises:

- a cooled glass probe (during performance testing 2 materials were tested but only glass proved to be suitable a the field test location) with velocity measurement (velocity pressure) and temperature measurement
- a cartridge box with adsorber cartridge and process computer to measurement data recording and control
- a measuring cabinet with:
  - sample gas cooler with condensation separator
  - mass flow meter
  - Gas meter
  - Pump
  - a process computer controlling the entire system and recording measurement data

General remarks
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 manufacturing process for 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 document as well as the certification mark remains property of TÜV Rheinland Energy GmbH. Upon revocation of the publication the certificate loses its validity. After the expiration of the certificate and on request of TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must no longer be used.

The relevant version of this certificate and its expiration date are also accessible on the internet at **qal1.de**.

Document history

Certification of the AMESA-D long-term sampling of dioxins/furans based on the documents listed below and the regular, continuous surveillance of the manufacturer's quality management system:

Initial certification according to EN 15267

Certificate no. 0000033596: 29 April 2014
Expiry date of the certificate: 31 March 2019
Test report no.: 936/21221445/A dated 9 October 2013
TÜV Rheinland Energie und Umwelt GmbH, Cologne
Publication: BAnz AT 01.04.2014 B12, chapter III number 1.1
UBA announcement dated 27 February 2014

Notifications in accordance with EN 15267

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 25 March 2015
Publication: BAnz AT 26.08.2015 B4, chapter V notification 22
UBA announcement dated 22 July 2015
(New software version)

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 28 February 2016
Publication: BAnz AT 01.08.2016 B11, chapter V notification 4
UBA announcement dated 14 July 2016
(new software version, new power supplies)

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 5 January 2017
Publication: BAnz AT 31.07.2017 B12, chapter II notification 15
UBA announcement dated 13 July 2017
(new software version, new frequency converter)

Statement issued by TÜV Rheinland Energy GmbH dated 20 February 2018
Publication: BAnz AT 17.07.2018 B9, chapter III notification 11
UBA announcement dated 03 July 2018
(new software version, new condensate pump)

Renewal of the certificate

Certificate no. 0000033596_01: 01 April 2019
Expiry date of the certificate: 30 June 2020

Notifications in accordance with EN 15267

Statement issued by TÜV Rheinland Energy GmbH dated 6 March 2019
Publication: BAnz AT 22.07.2019 B8, chapter V notification 3
UBA announcement dated 28 June 2019
(new company name, new software version)

Renewal of the certificate

Certificate no. 0000033596_02: 01 July 2020
Expiry date of the certificate: 30 June 2025