

CONFIRMATION

of Product Conformity (QAL1)

AMS designation: CMM for Hg

Manufacturer: Gasmot Technologies Oy
Pulittitie 8 A 1
00880 Helsinki
Finland

Test Laboratory: TÜV Rheinland Energy GmbH

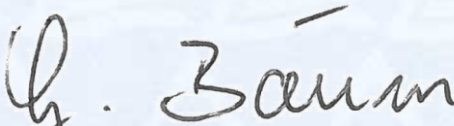
**This is to certify that the AMS has been tested and certified
according to the standards**

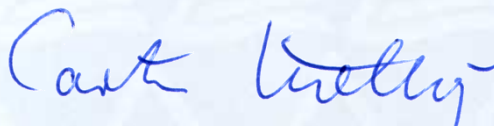
**EN 15267-1 (2009), EN 15267-2 (2009), EN 15267-3 (2008)
and EN 14181 (2015)**

The AMS underwent independent expert testing and was accepted.
This confirmation is valid up to the publication of the certificate,
but no longer than 6 months from the date of issue
(this document contains 4 pages).

Expiry date: 2 September 2018

TÜV Rheinland Energy GmbH
Cologne, 2 March 2018


i. V. Dipl.-Ing. G. Baum


i. A. Dipl.-Ing. C. Röllig

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.

Confirmation:
2 March 2018

Test Report: 936/21238865/A dated 2 October 2017
Expiry date: 2 September 2018

Approved application

The tested AMS is suitable for use at combustion plants according to Directive 2010/75/EU, chapter III (13. BImSchV). The measured ranges have been selected so as to cater for 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 three-months field test at lignite-fired power plant.

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. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the limit values 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 confirmation

This confirmation is based on:

- Test report 936/21238865/A dated 2 October 2017 issued by TÜV Rheinland Energy GmbH
- The ongoing surveillance of the product and the manufacturing process
- Expert testing and approval by an independent body

Confirmation:
2 March 2018

AMS designation:

CMM for Hg

Manufacturer:

Gasmet Technologies Oy, Helsinki, Finland

Field of application:

For plants according to Directive 2010/75/EU, chapter III (13th BImSchV)

Measuring ranges during performance testing:

Component	Certification range	Supplementary measuring ranges			Unit
Hg	0–10	0–45	0–100	0–1000	µg/m ³

Software version:

1.189

Restrictions:

none

Notes:

1. The maintenance interval is four weeks.
2. Wet test gases should be used for testing Hg.
3. An external test gas generator is needed for regular span checks during the maintenance interval.
4. The length of the sample gas line was 20m for the laboratory and field test.
5. The measuring system needs to be aligned with the zero and span point daily using the integrated Hg(0) generator.

Test Report:

TÜV Rheinland Energy GmbH, Cologne

Report no. 936/21238865/A dated 2 October 2017

Tested product

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

The AMS is an extractive continuous mercury emission monitoring system. Sample gas is first extracted from the waste gas via an electrically heated sampling tube and then diluted in the probe with nitrogen. The diluted sample gas is then led to the analyser cabinet where it first passes through a thermal catalytic converter which converts chemically bound mercury present in the waste gas into atomic mercury. The mercury present in the waste gas is then measured using cold-vapour atomic fluorescence spectroscopy.

The AMS under test comprises the following main components:

- Sampling probe (stainless steel, glass coated) heated to 180 °C with diluter and back purging unit.
- Cable bundle between probe and analyser cabinet containing 4 separate gas lines (diluted sample gas from the probe to the analyser cabinet (heated), adjustment gas (heated), compressed air for back purging and nitrogen for diluting from analyser cabinet to probe), max. 12 m in length
- air-conditioned analyser cabinet (dimensions 2.03/0.6/0.6 m incl. air conditioner) comprising the following components:
 - Mercury analyser with integrated high temperature converter
 - Adjustment gas generator for Hg(0) and HgCl₂ (not part of the performance test) adjustment gas
 - Nitrogen generator for the purpose of dilution
 - Windows PC running Gasmeter MAUI (Mercury Analyzer User Interface) software for control and evaluation
 - Sample gas pump
 - Compressed-air conditioning
 - Interface card for analogue and digital inputs and outputs

The adjustment generator is able to generate Hg(0) and HgCl₂ separately. A heated line transports the adjustment gas generated to the probe. During the performance test period, the AMS zero and span points were automatically compared with Hg(0) daily.

The HgCl₂ function of the adjustment gas generator was deactivated during the performance test. The current software version is: 1.189.

The current manual version is: D2.2 (19.9.2017).