# PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

## *Valmet DNA Emission Monitoring and Reporting System (EMRS) 2.0*

Produced by:

Valmet
Automation Business Line
PO Box 237
FI-33101 Tampere
Finland

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

**MCERTS Performance Standards and Test Procedures for
Environmental Data Management Software, Version 2, (September 2011)
in respect of:**

**Part A - Generic Software Quality**
**Part B - Data Management General Aspects**
**Part C1 - CEMS data management applications - Generic Requirements**
**Part C2 - CEMS Data Management Applications - EN14181 Requirements**

| | |
|---|---|
| Project No.   : | 70019025 |
| Certificate No : | Sira MC150277/00 |
| Initial Certification   : | 2nd June 2015 |
| This Certificate issued: | 2nd June 2015 |
| Renewal Date: | 1st June 2020 |

Emily Alexander BSc (Hons)
Deputy Certification Manager

MCERTS is operated on behalf of the Environment Agency by

## Sira Certification Service

CSA Group, Unit 6 Hawarden Industrial Park, Hawarden, u
Tel: +44 (0)1244670900

**Approved Site Application**

Any potential user of the certified software should:

1) Ensure that it is suitable for the platform on which it will be installed (if necessary in consultation with the software producer)

2) Ensure that the selection and operation of the software is appropriate to the application

**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:

Sira report ref: R70019025 v1.0 Metso Automation Inc DNA EMRS Software MCERTS Assessment Report, dated 25 February 2015

**Product Certified**

| Product | Version | Remarks |
|---|---|---|
| DNA Emission Monitoring and Reporting System (EMRS) | 2.0 onwards | Later minor changes to the certified version are permitted in accordance with the conditions of the standard. |

The certified software includes the following modules and components:

**Platform tools**
- DNA C2013 Information System 15.1:
- DNA Historian Calculation Environment 3.3.4
- DNA Report Manual Data Entry 4.3.1
- DNA Report Designer 3.3.1
- DNA Report Portal 5.1.3
- DNA Report Viewer 6.3.1
- DNA Audit Trail 3.2.1
- DNA Report Audit Trail 3.1.3
- DNA Historian DNAdata 9.0.8
- DNA Historian Shared 15.3.3
- DNA Historian Diagnostics 1.3.2
- DNA Historian Database 15.1.2
- Symantec System Recovery 2011

**Application packages**
- DNA LCP Emission Monitoring 2.0
  - EmissionMonitoring_LCP
  - EmissionMonitoring_LCP_1H
  - EmissionMonitoring_LCP_1D
  - EmissionMonitoring_LCP_48H
  - EmissionMonitoring_LCP_QAL2_1H
  - EmissionMonitoring_LCP_Project

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- DNA WI Emission Monitoring 2.0
  - EmissionMonitoring_WI
  - EmissionMonitoring_WI_10MIN
  - EmissionMonitoring_WI_05H
  - EmissionMonitoring_WI_1D
  - EmissionMonitoring_WI_QAL2_05H
  - EmissionMonitoring_WI_Project

- DNA QAL3 Monitoring 2.0
  - QAL3.Broker
  - QAL3.CUSUM

**Software Modifications**

In the event of a major release the developer shall provide brief supporting evidence to the Certification Body who will advise whether recertification is necessary.

**Certified Performance**

The DNA EMRS application is able to perform the following tasks:

- Averages of 1, 5, 10, 15, 30 and 60 minutes periods, X hours, daily, monthly and yearly aggregations,
- Raw data correction to standard reference,
- Reporting capabilities for WID, LCPD, etc.,
- Customisable reports, programmable automatic outputs to various formats (HTML, PDF, etc.) and destinations (printer, mail, file sharing, etc.),
- QAL2 and automatic/manual QAL3 management including control charts and other SPC (statistical process control) techniques,
- Communication with PLCs (Programmable Logic Controllers) using Modbus, OPC, etc.,
- Regulatory control of emission limit values, unavailability, trends,
- Overview display with real-time trends, gauges, data grids, digital status indicators and alarms.

DNA EMRS can run in the following environments:
Clients
- Windows Server 2008 R2 64 bit with service pack 1. (Standard Edition)
- Windows 7 Professional with service pack 1
- Internet Explorer - IE8 or newer

Servers
- Windows Server 2008 R2 64 bit with service pack 1. (Standard Edition)
- Internet Explorer - IE8 or newer

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HP and Dell servers are used for DNA EMRS deliveries. At the moment, the following servers are fulfilling the requirements:

- Dell PowerEdge T320 Tower Server with the following:
  - Intel Xeon QuadCore E5-2407, 2.2 GHz
  - 8 GB RAM
  - 2* 1 TB SATA hot-plug disk units (RAID mirroring, net 1TB)
  - 2 * Ethernet interfaces
  - Dual, hot-plug redundant power supply
  - Windows Server 2008 R2 SP1

- HP ProLIiant ML350 G8 Server with the following:
  - Intel Xeon QuadCore E5-2609, 2.4 GHz
  - 8 GB RAM
  - 2 * 500 GB SATA hot-plug disk units (RAID mirroring, net 500 GB)
  - 2 * Ethernet interfaces
  - Dual, hot-plug redundant power supply
  - Dual, hot-plug redundant fan
  - Windows Server 2008 R2 SP1

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## Description

Valmet DNA Emission Monitoring and Reporting System fulfils the monitoring and reporting requirements of Industrial Emission Directive and EN 14181 standard for quality assurance of an automated measurement system. It is configurable for different type of combustions plants as well as for waste incineration and co-incineration plants. The quality assurance solution meets level QAL 3 requirements of the EN 14181 standard and can be utilized for reporting and monitoring with different analyzers.

The advanced solution for emission monitoring and reporting is based on the Valmet DNA information system. The solution produces all the necessary information both for the plant's own needs and for the authorities. Ready-made reports save time and make the emission data more usable and reliable. Tight integration in Valmet DNA process control system enables actual, even proactive emission management. Quick reaction and efficient analysis in disturbance situations are enabled. Long-term reporting and follow-up of trends are supported in the system.

Real-time concentration calculations as well as average calculations at the levels required are performed. The correction to standard reference, the correction by the calibration function defined in QAL2 reference measurements, the subtraction of 95 % confidence value, if allowed, and the validation are included. In addition to the concentrations, also total emissions are calculated. The measurement device status is checked and reported separately (disturbance, maintenance or testing) as well as the operation of the plant and the flue gas purification systems. Also emission forecasts, accumulative and moving averages can be included as support information for effective emission controlling of power plant.

The results are reported clearly in the form of browser reports, displays and automatic trends. Reports can be saved in pdf-format and further analysis of the data can be made in a MS Excel-environment. Reliable emission reports are produced for the time period required, including the concentration value comparison against the emission limits. Real-time emission concentrations and the possible exceeds can be monitored on-line through the emission monitoring display.

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**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 MC150277/00

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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