TCR TECORA
POLLUTION CHECK

TES Thomson Environmental Systems
www.thomsongroup.com.au

In Accordance with:
EN 1948-1, CEN/TS 1948-5
US EPA Method 23

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INDUSTRIAL EMISSIONS

DECS®

Dioxin Emission Continuous Sampling

mCERTS SIRA MC240431/00

TÜVRheinland CERTIFIED

Long-Term Sampling System for Dioxins on Stack Emissions

Control Unit

DECS® is an automatic sampling system, realized for permanent installation on stacks, dedicated to "long terms" Dioxins and Furans collection (PCDD/PCDF) and other POP's.

The sample is taken by means of a heated probe and a particulate filter, also heated, after which it is rapidly cooled and percolated through an adsorbent vial filled with XAD-2 resin.

Sampling takes place completely automatically and respecting the isokinetic conditions.

DECS® allows you to extend the duration of sampling to collect a larger amount of sample to be analyzed, improve the characterization of real emissions, increase toxicological information, have a reliable emission footprint.

The DECS® is composed by 2 units:

- Sampling Unit;
- Control Unit;

MAIN CHARACTERISTICS

- Sampling of PAH's with Filter/ Condenser Method and adsorbing trap on the wet gas in accordance with Standards EN 1948-1, CEN/TS 1948-5 and US EPA Method 23;
- The Control Unit can manage up to 4 Sampling Units;
- Distance between Sampling and Control Units can be up to 100mt;
- Fully automated sampling, no operator's presence required;
- Preparation and washing operations are automatic;
- Full Remote Control via Internet or Intranet;
- The DECS can be easily upgraded to comply to other standards using the heated probe with out stack box for solid phase and side sampling for gas pahse such as for Heavy Metals, Hg and HCl.

Sampling Unit

The Sampling Unit is the part installed on the stack sampling point and is responsible for the sample extraction, without altering its composition, and collecting the solid and gas phases on the appropriate device.

Display Details

INNOVATION MADE IN ITALY

Technical specifications may change without previous warning - Ed. 06/2024

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Suitability Tested EN 15267 QAL1 Certified Regular Surveillance
www.tuv.com ID 0000685397

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DECS®

Dioxin Emission Continuous Sampling

The Sampling Unit is composed by:

- Heated Probe with interchangeable nozzle;
- Heated Box for Filterholder;
- Condensation System;
- Adsorbing Trap for XAD2
- Pitot Tube (optional);

The Sampling Unit has been designed according to the following requests:

- Ready to work in any moment;
- There is no need to put in or out the stack for each sampling;
- Particulate collecting filter enclosed in a heated box;
- Easy susbtitution of filter holder cartridge, adsorbing trap and collection devices;
- Made of Glass or Titanium;
- Designed for outdoor mounting;
- Applicable with DN 150 (on request DN 100) sampling port;
- Dimensions: 600x700x350mm (w x h x d);
- Weight: 37Kg.

Control Unit

The control unit is the interface between the sampling unit and the operator who leads all the system function; it is generally placed in a safe area easily reachable.

Realised in an industrial cabinet, it is connected to the sampling unit through electrical and pneumatic connections.

It has measurement and control devices built-in, useful to guarantee in an automatic way the measurement execution according to the laws in force.

The available interfaces are:

a LCD 10" screen, a keyboard, a printer and an internet/Ethernet connection.

The high automation of the system allows to begin the measurement through the START option which can be activated via Internet/Intranet as well.

At the end of the measurement a summing up report containing all the necessary elements to calculate the concentrations and the subjective valuation of the measurement quality is produced.

It is also available a continuous registration of the main parameter and anomalous situation.

The control unit has been designed and built to satisfy the following specifications:

- Full automatic isokinetic control;
- Temperature and sample conditioning automatic control;
- Automatic Leak test;
- Accurate Sampled volume measurement;
- Graphic interface managed by a self driven software;
- Data logger;
- Built-in thermal printer;
- Internet / Ethernet connection;
- Four analog inputs;
- Input signal concerning the process operation status;
- Fault system status output signal;
- Power supply: 200 VCA 50Hz 16A;
- Air Supply: 6 bar, oil free
- Dimensions: 600x1800x600mm (w x h x d)
- Weight: 93 kg

Stack installation

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DECS® is equipped with connectivity devices that allow reception and transmission of data.

TCR TECORA® solution consists of a Thin Client that supports the transmission protocol TCP/IP and can be installed on the user's PC with two possible options:

DECS® Supervisor Software:

is included, with a free license, in the basic supply of DECS®.

Supervision software allows to view on remote PC connected to the TCP/IP network, operational graphic pages, available on DECS® screen and allows to remotely download data as: sampling data, configuration data, alarms and reports stored in the memory of the instrument.

DECS® Control Software:

with a paid license. Allows to obtain, in addition to the SUPERVISOR functions, also full remote operation of DECS® from workstation PC where Control & Supervision software is installed.

Transport case for filter holders

Process Characteristics

- Velocity range: 2 ÷ 40 m / s
- Stack temperature: max 350 ° C
- Water vapor content: max 40% by volume

Sampling Unit

- Applicable with DN 150 flanges (DN 100 on request)
- Condensate drain: max flow rate required 0.5 m^3/h
- Dimensions: 600 X 700 X 350 mm (bxhxp)
- Weight: 37 Kg

Control Unit

- Power supply: 220 VAC/50 Hz 16A
- Compressed air: 6 bar, oil free
- Dimensions: 600x1800x600 mm (bxhxp)
- Weight: 140 Kg

Process Characteristics

- Closed circuit cooling system
- Filter device for low concentrations
- Replacement cartridge for XAD2
- Measurement of the flow in stack
- Remote control software

Codes for Orders

Control Unit	AC99-201-0000SP
Control unit Accessories	
Heated line per mt	AC99-200-9908SP
Heated line control	AC99-200-9907SP
Supervisor program	AC99-200-0029SP
Cabinet heater	AC99-200-9909SP
Sampling Unit	
Stainless steel probe	AC99-201-0010SP
Titanium probe	AC99-201-0015SP
Sampling unit accessories	
Filtration device	AC99-200-0020SP
Adsorbent trap	AC99-200-0022SP
Probe washing device	AC99-200-0013SP
Filter holder transport case	AC99-200-0029SP
Cooling systems	AC99-200-0010SN

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