

Software WinEMAG

CONTROL EMISSION SYSTEM



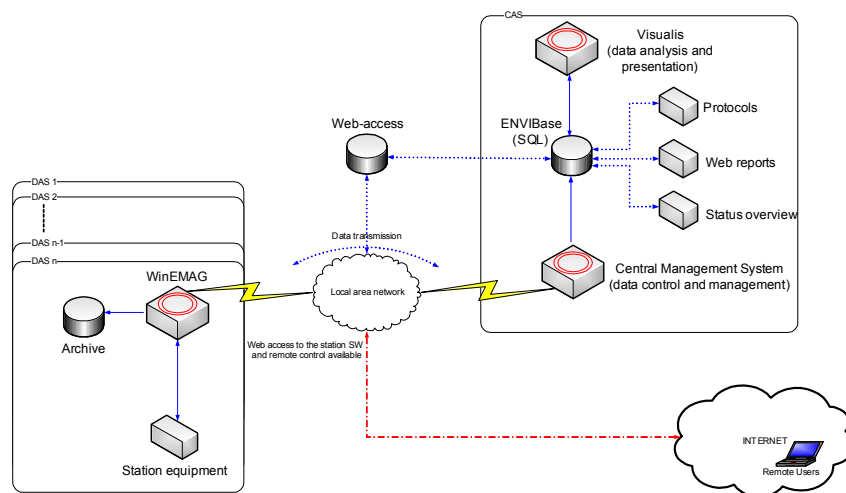
WinEmag is complete emission control system, which provides high quality and comprehensive tools to continuous emission monitoring systems. System modularity, its high flexibility, and universality allows connection of several emission sources to one data acquisition system only. In addition, it does not require any intermediaries industrial data loggers, because it is capable to monitor in real time all the required values directly from the analyzers and digital or analogue inputs.

General characteristics:

- Fully in compliance with EN 14181
- provides emission monitoring in accordance with Ordinance 706/2002, 408/2003 and WID 2000/76/EC
- includes professional tools for data evaluation, analysis, visualisation, reporting and presentation

Basic features:

- The data are stored in PC (flexible sampling period, i.e. 5 seconds)
- SQL format database with flexible structure
- Archive data backups (almost unlimited data amount backups)
- Different averaging functions are applicable (1, 30, 60 ... min)
- Status signals and alarms evaluation - data validity flags
- Convert volume/volume concentrations to mass/volume concentrations
- Provide intuitive on-screen menus for an operator to check the status of instruments
- Run diagnostic checks on all on-line instrumentation
- Allow data exchange with a portable laptop, USB flash disc or with remote device
- Enable an operator to re-configure the system either on site or remotely via GSM/Ethernet
- Data correction according to regulations in force
- Correlation of measures with plant status signal and operating conditions (produced power, fuel flow, steam flow)
- Automatic emission limits evaluation and official report generation
- Manual and/or remote calibration including QAL3 evaluation (CUSUM)
- Extension of reporting tools according to regulations in force
- Data export to MS Office formats or TXT files



Steel factory Kármén - CEMS2 - YF4 Plant

Thursday, September 06, 2013 08:19:12

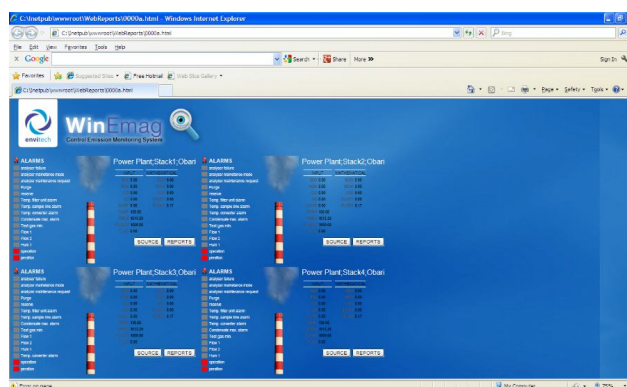
Source ID No.	Source name	Source status	Fuel	Date	Time
1012	Steel factory YF4 Plant Kármén	No operation	NO DEF	05/09/2013	08:19

Quantity	Unit	Value	attribute
SO2	mg/m ³	23.92	Invali
NOx	mg/m ³	0.95	Invali
CO	mg/m ³	7.92	Invali
CO ₂	g/m ³	21.25	Invali
O ₂	mg/m ³	34.00	Invali
O ₂	%	19.34	Invali
TEMP	°C	253.92	Invali
PRESE	mbar	989.84	Invali
FLOW	l25534.29		Invali
TEMP hose	°C	27.00	Invali

Quantity	Unit	Value	attribute
SO2	mg/m ³	0.00	Invali
NOx	mg/m ³	0.00	Invali
CO	mg/m ³	0.00	Invali
CO ₂	g/m ³	0.00	Invali
O ₂	mg/m ³	0.00	Invali
MFCO2	g/s	0.26	Invali
MFCO	g/s	0.95	Invali
MFCO3	g/s	553.47	Invali
MFCU3T	g/s	1.18	Invali
FLOW	Nm ³ /s	15.65	Invali

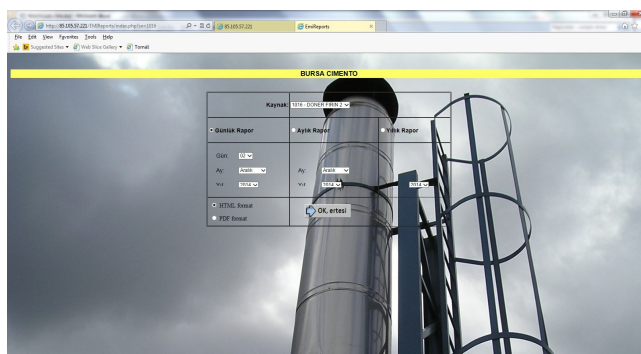
Name	Status
gas analyser error	
gas analyser function check	
gas analyser maintenance	
NOxO2 converter temp. alarm	
sample gas flow alarm	
sample gas cooler alarm	
feed analyser alarm	
system maintenance/probe purging	
general system alarm	
condensate alarm	
flow sensor purging	

Database directory: C:\Archiv
Archiving time: 500 days
Measuring software system: WinEmagD E11\Arch



Data evaluation, analysis, visualisation, reporting and presentation (module Visualis):

- Data validation according to regulations in force
- Built-in statistics tools, data filters, attributes etc.
- Cross check with legal limits
- Moving (rolling) or interval averaging function
- Hourly and daily trends of acquired values, daily statistics
- Acquisition of alarms and fault detection
- Evaluation of zero and span drifts (in compliance with QAL3)
- User selectable data outputs graphs, tables, wind or concentration roses, statistics diagrams, calibration protocols, CUSUM cards etc.
- Simple and easy access to your database with data conversion possibility, ISO data converters available
- Possibility of creation of own mathematical formulas and visualization schemes, project and user based data processing
- User selectable export forms easy reporting
- The WinEmag also provides a web presentation tools, which allow to display all stack status parameters and measured data on a web page. The multiple stack visualisation is available (several stack information displayed on one page).
- Additional modules for special visualisation of data are available on request, e.g. an integration of data to geographical background etc.



Daily report of the emission values from 04.09.2013

Company: Steel factory Source: YF4Plant
 Measuring place: Kardemir
 Total CEMS operation time: 0hour 0min
 ID of authorized persons: Code: 1012
 Printed Date: 05.09.13 Page: 2/6

Quantity	SO2r	NOxr	COr	CO2r	
Unit	mg/m ³ N	mg/m ³ N	mg/m ³ N	g/m ³ N	
EL	-	-	-	-	
I(%)	20	20	10	30	Note
DAV	-	-	-	-	
MPD in kg	0.00	0.00	0.00	0.00	
n HHAV < EL+I	0/0%	0/0%	0/0%	0/0%	
n HHAV > 2(EL+I)	0/0%	0/0%	0/0%	0/0%	
n valid HHAV	0	0	0	0	
n invalid HHAV	0	0	0	0	
n replaced HHAV	0	0	0	0	
fraction of F HHAV at SO					
EQ	0.00	0.00	0.00	0.00	
Min HHAV					
Max HHAV					

Legend:
 HHAV < EL+I SD - Shut-down
 C - HHAV > 2(EL+I) SU - Start-up
 F - invalid S - Shutting
 E - replaced SO - Stable operation
 Q - DAV > EL T - Testing
 CAL - Calibration i - Error band
 Other - Other state MPD - Mass of pollutants per day in kg
 Fail - Failure

CUSUM card - EN 14181

Date and time:			
Name of technician:			
Measurement system:			
Model:			
Serial Number:			
Brand:			
Location:			
Measurement range:			
	ZERO		SPAN
AMS	=	AMS	=
Reference value	=	Reference value	=
Measured value	=	Measured value	=
Dr	=	Dr	=
Precision check			
hs	=	ks	=
sp	=	st	=
st	=	st	=
Reduced precision	YES / NO (st > hs)	YES / NO (st > hs)	
Drift check			
lx	=	lx	=
$\sum(\text{pos})p$	=	$\sum(\text{neg})p$	=
$\sum(\text{pos})t$	=	$\sum(\text{neg})t$	=
Drift	YES / NO	YES / NO	
Readjustment required:	YES / NO	YES / NO	
Date and signature:			