WinEmag control emission system
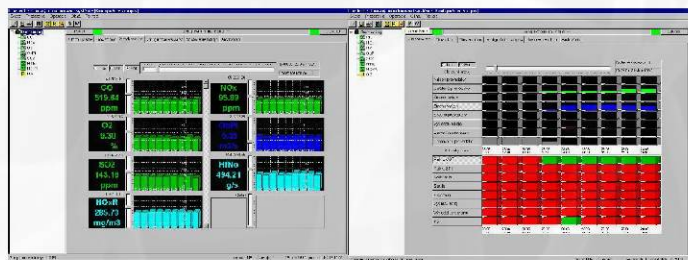
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More than 500 our applications for the data management, processing and visualisation are being used worldwide with great success.

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.

Example of displayed data screens
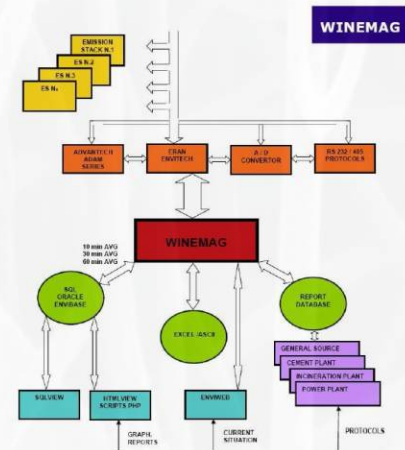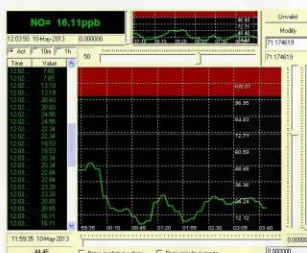
The WinEmag system provides emission monitoring in accordance with Ordinance 706/2002, 408/2003 and WID 2000/76/EC and it is completely in compliance with <u>EN14181</u> **requirements and provides following data processing possibilities:**

- **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 conc.**
- **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**

Year report of emission values from year 2010

User name:		Measuring place:	Teknecik		Stack:	Stack 1
System working time:		Power Plant	3715. hour 6. min		Fuel :	OIL
ID of autorized persons:		z			Code:	1001
Printed:		01.01.11			Page:	1/3

Value	SO2r		NOxr		COr		
Unit	mg/m³N	t/month	mg/m³N	t/month	mg/m³N	t/month	
EL	1000.00		400.00		100.00		
I(%)	20		20		10		
Date	PMH	MZLm	PMH	MZLm	PMH	MZLm	Note
January							
February							
March							
April							
May							
Jun	674.58	21.312	317.44	10.074	4.64	0.130	
July	930.64	49.668	453.05	24.344	10.13	0.558	
August	1079.09	110.470	486.41Q	49.840	10.17	1.048	
September	1080.64	101.817	471.31Q	44.814	29.30	2.884	
October	1821.38AQ	64.681	707.13AQ	26.127	48.42AQ	1.850	
November	1615.36AQ	19.586	542.44AQ	6.682	10.28	0.113	
December	1213.69Q	84.843	446.31Q	31.821	8.19A	0.574	
PRH	1202.94	140.58	496.85	60.21	19.38	2.22	
MZLr in t	452.377		193.702		7.157		
n (PHH-I) < 2*EL	3053/94.81%		3152/98.38%		3218/99.94%		
n (PHH-I) > 2*EL	167/5.19%		52/1.62%		2/0.06%		
n valid PHH	3220		3204		3220		
n unvalid PHH	321		337		321		
n substit. PHH	0		0		0		
n PDH < EL	117/82.39%		120/85.11%		141/99.30%		
n PDH > EL	25/17.61%		21/14.89%		1/0.70%		
n valid PDH	142		141		142		
n unvalid PDH	15		16		15		
% of PHH during UP	9.07%		9.52%		9.07%		
EQ	0.00		0.00		0.00		
Min PHH	0.00		0.00		0.00		
Max PHH	3489.52		1330.76		333.17		
Min PDH	152.95		54.29		1.80		
Max PDH	2638.55		983.77		116.04		

PDH - EL
F - unvalid
Q - n(PDH > EL)>0
A - n (PHH > 2*EL) > 0

PHH - hour average
PDH - day average
PMH - month average
PRH - year average
EL - Emission limit

EQ - Emission quocient
I - Confidence interval
MZLr - Year Mass Flow in [t]
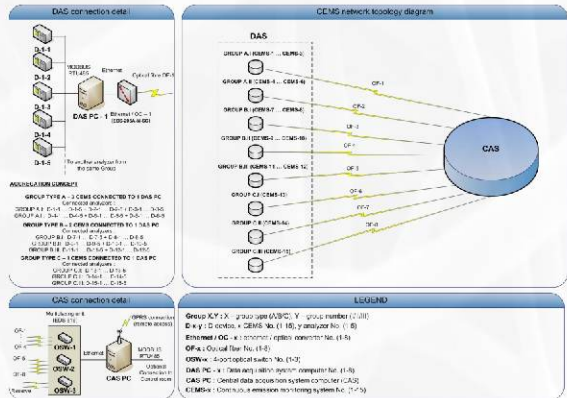MZLm - Month Mass Flow in [t]

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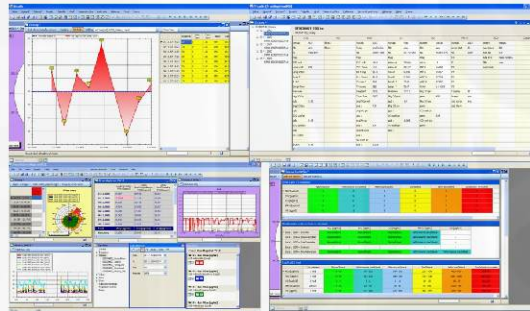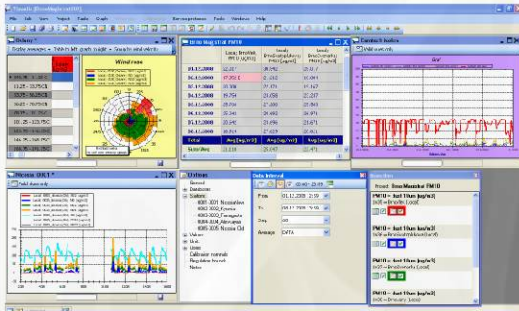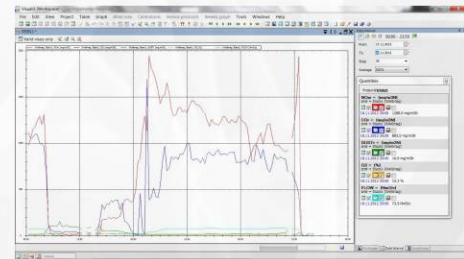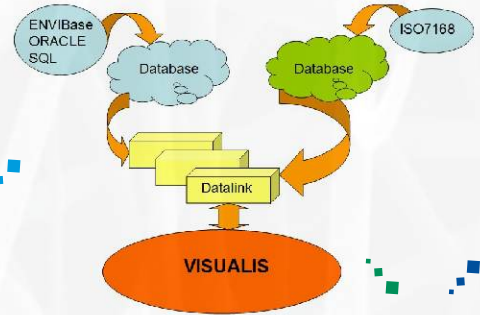# WinEmag control emission system

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WinEmag also includes professional tools for data evaluation, analysis, visualisation, reporting and presentation. This module is referred as Visualis and it is providing following functions through user friendly interface:
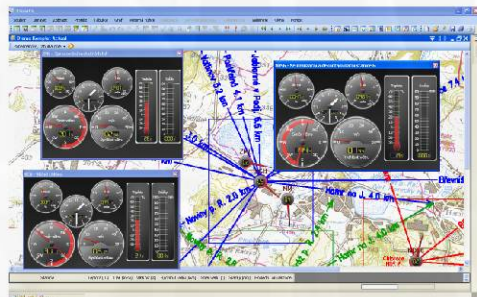
- data validation according to regulations in force
- built-in statistics tools, data filters, attributes etc.
- cross check with legal limits
- moving (rolling) or interval averaging function
- hourly and daily trends of acquired values, daily statistics
- acquisition of alarms and fault detection
- 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 (sevaral stack information displayed on one page).

Additional modules for special visualisation of data are available on request, for example an integration of data to geographical background etc.

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