

WinEmag control emission system

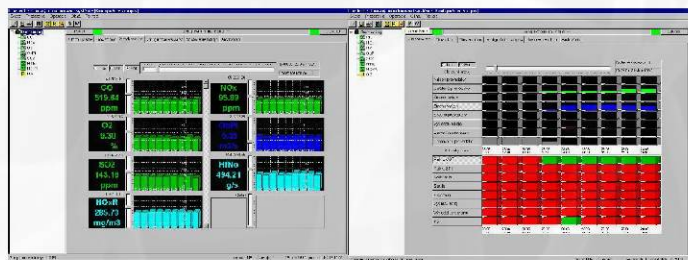


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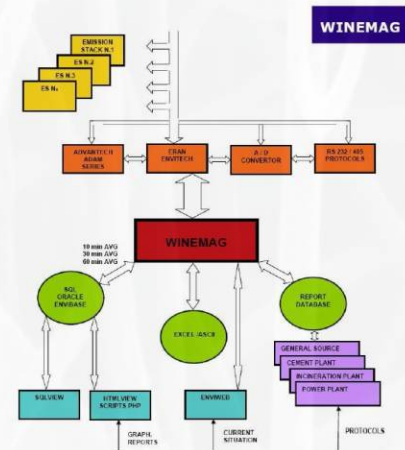
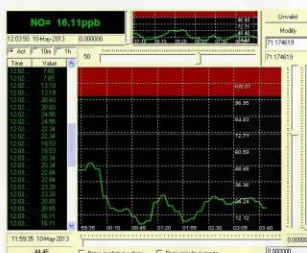
More than 500 our applications for the data management, processing and visualisation are being used worldwide with great success.

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.

FULLY IN COMPLIANCE WITH EN14181



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 EN14181 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

Stack 1

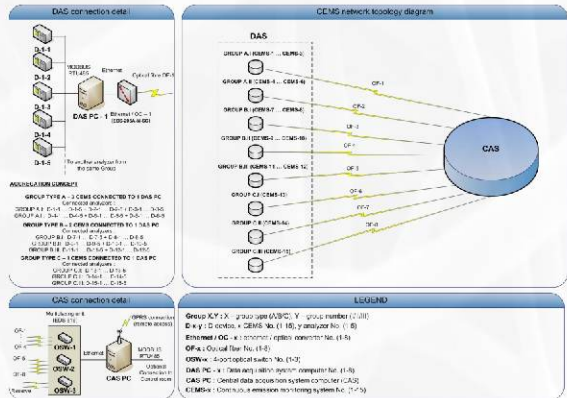
- NOx
- SO2
- CO
- TEMP
- PHS
- FLOW
- MSO2
- WMSO
- MEUS1
- MSO2
- WMSO
- MEUS1
- MSO2
- WMSO
- MEUS1
- MSO2
- WMSO
- MEUS1

Parameter	min	max	subrange	range	subrange range switch
Temperature	0	1500	0	0	0
Flow	0	10	0	0	0
MSO2	0	100	0	0	0
WMSO	0	100	0	0	0
MEUS1	0	100	0	0	0

Year report of emission values from year 2010

User name: Power Plant, Measuring place: Teknick, System working time: 3715. hour 6. min, ID of authorized persons: 2, Printed: 01.01.11, Code: 1001, Page: 1/3

Value	SO2r	NOxr	CO		
Unit	mg/m ³ -N	mg/m ³ -N	mg/m ³ -N		
EL	1000.00	400.00	100.00		
(%)	20	20	10		
Date	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	486.410	49.840	10.17 1.048
September	1080.64	101.817	471.310	44.814	29.30 2.884
October	1621.38AQ	84.681	707.13AQ	26.127	48.42AQ 1.850
November	1615.38AQ	19.588	542.44AQ	6.682	10.28 0.113
December	1213.69Q	84.843	446.31Q	31.821	8.18A 0.574
PRH	1202.94	140.58	486.85	60.21	19.38 2.22
MZLm in t	452.377	193.702	7.157	-	-
n (PRH-L) > 2*EL	3053/4.81%	3152/98.38%	3218/99.94%	-	-
n (PRH-L) > 2*EL	167/5.19%	52/1.62%	2/0.06%	-	-
n valid PRH	3220	3204	3220	-	-
n invalid PRH	321	337	321	-	-
n invalid PRH	0	0	0	-	-
n PDH > EL	117/82.39%	1220/85.11%	141/99.30%	-	-
n PDH > EL	25/17.61%	21/14.89%	1/0.70%	-	-
n valid PDH	142	141	142	-	-
n invalid PDH	15	15	15	-	-
% of F 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	1489.52	1330.76	333.17	-	-
Min PDH	152.95	54.29	1.80	-	-
Max PDH	2638.55	863.77	116.04	-	-



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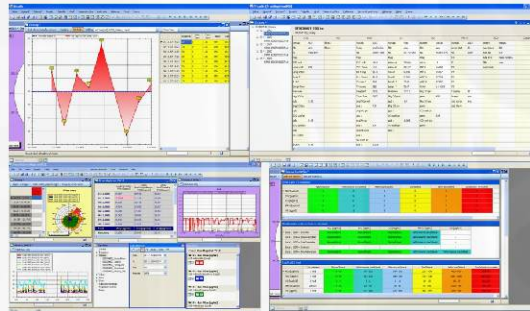
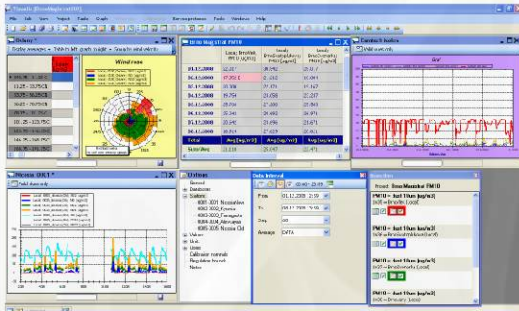
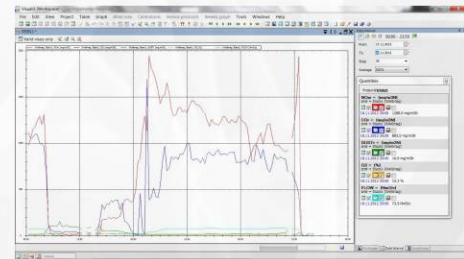
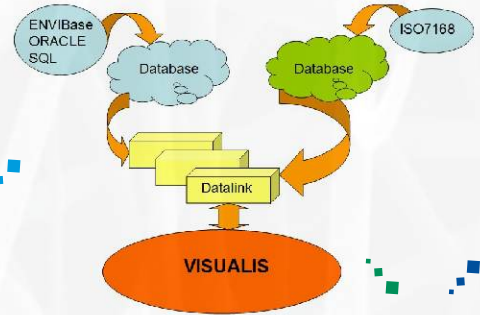


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WinEmag also includes professional tools for data evaluation, analysis, visualisation, reporting and presentation. This module is referred as Visualis and it is providing following functions through user friendly interface:

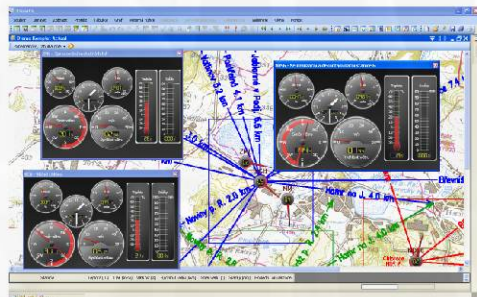
- data validation according to regulations in force
- built-in statistics tools, data filters, attributes etc.
- cross check with legal limits
- moving (rolling) or interval averaging function
- hourly and daily trends of acquired values, daily statistics
- acquisition of alarms and fault detection
- 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



FRNK:	NOx[ppm]	FRNK:	FRNK:	FRNK:	FRNK:
	CO[ppm]	SO2[ppm]	PM10[ppm]	PM2.5[ppm]	PM10[ppm]
17.11.12 00:30	1050.9	1042.7	15.7	9.9	73.7
17.11.12 01:30	1148.3	1066.8	15.0	9.8	72.9
17.11.12 02:30	1174.3	1090.5	14.9	9.8	73.4
17.11.12 03:30	1240.8	1092.3	15.6	9.8	73.3
17.11.12 04:30	1291.6	1000.0	18.8	9.9	74.0
17.11.12 05:30	1203.7	992.1	18.8	9.8	73.4
17.11.12 06:30	1209.5	996.1	15.7	9.9	73.4
17.11.12 07:30	828.5	675.7	52.6	16.4	29.3
17.11.12 08:30	106.1	116.2	93.1	19.4	21.2
17.11.12 09:30	26.5	67.3	104.9	19.5	21.2
17.11.12 10:30	10.5	50.1	106.1	19.6	21.1
17.11.12 11:30	3.4	41.7	107.9	19.6	21.1
17.11.12 12:30	5.1	48.3	109.7	19.6	21.1
17.11.12 13:30	6.6	45.6	154.2	19.6	21.1
17.11.12 14:30	2.6	34.4	102.3	19.6	21.1
17.11.12 15:30	6.8	36.8	98.3	19.6	21.0
17.11.12 16:30	8.9	49.1	114.7	19.6	21.0
17.11.12 17:30	3.8	41.1	98.1	19.6	19.7
17.11.12 18:30	6.0	39.2	96.8	19.5	20.2
17.11.12 19:30	8.0	46.8	97.7	19.5	19.7
17.11.12 20:30	9.6	39.1	94.9	19.5	20.1
17.11.12 21:30	12.3	35.0	93.9	19.5	20.1
17.11.12 22:30	12.5	33.2	89.0	19.4	20.2
17.11.12 23:30	8.7	31.6	92.9	19.3	20.5
17.11.12 00:30	198.8	362.3	52.1	18.1	21.0
17.11.12 01:30	188.5	387.5	49.0	18.0	21.0
17.11.12 02:30	195.6	384.5	56.1	18.0	20.9
17.11.12 03:30	207.5	280.9	40.7	17.9	21.1
17.11.12 04:30	298.5	353.3	48.8	17.4	21.1
17.11.12 05:30	384.4	156.0	39.5	17.0	22.0
17.11.12 06:30	396.1	146.4	33.8	16.8	22.5
17.11.12 07:30	387.8	116.2	29.0	16.1	22.8
17.11.12 08:30	358.6	54.7	23.3	14.7	23.2
17.11.12 09:30	380.1	22.8	20.1	13.9	23.3
17.11.12 10:30	345.6	320.5	65.3	16.8	21.8
Count of valid	4185.42%	4185.42%	4185.42%	4185.42%	4185.42%
Minimum	2.6	21.6	14.9	9.8	19.6
Maximum	1209.5	1098.5	154.2	19.6	74.0

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, for example an integration of data to geographical background etc.



NOx	Avg [ppm]	SO2	Avg [ppm]	PM10	Avg [ppm]	PM2.5	Avg [ppm]
Sum/Avg	345.6	320.5	65.3	16.8	21.8		
Count of valid	4185.42%	4185.42%	4185.42%	4185.42%	4185.42%		
Minimum	2.6	21.6	14.9	9.8	19.6		
Maximum	1209.5	1098.5	154.2	19.6	74.0		

