

Plant Historian EM

Energy Management System

Plant Historian is an energy monitoring and controlling system for the complete recording of energy flows and for the identification of potentials for energy optimization and their realization. Companies benefit from transparent data, detailed visualization options and the control and optimization of energy costs.

Plant Historian EM provides energy monitoring and controlling as a basis for energy management according to DIN EN ISO 50001 and has been certified by the Federal Office of Economic and Export Control (BAFA).

Ihr Logo		Übersicht der Anlagenkosten				Plant Historian Energiemanagement		imes SOLUTIONS	
	von	bis	Tarif	Menge	Kosten	% prozentual			
Elektrische Energie									
Tarif 1	20.04.2010	10.05.2010	0,75 €/kWh	65.223,76 kWh	49.688 €	76,32%			
Tarif 2	16.04.2010	19.04.2010	0,54 €/kWh	28.534,91 kWh	16.409 €	23,68%			
Tarif 3	NA	NA	0 €/kWh	0,00 kWh	0 €	0,00%			27,27%
Summe					65.076,66 €	100,00%			
Gas									
Tarif 1	16.04.2010	23.04.2010	2,56 €/kWh	3.707,06 kWh	9.490 €	28,46%			
Tarif 2	24.04.2010	10.05.2010	2,47 €/kWh	9.649,66 kWh	23.836 €	71,52%			
Tarif 3	NA	NA	0 €/kWh	0,00 kWh	0 €	0,00%			13,97%
Summe					33.324,72 €	100,00%			
Rohstoffe									
Cullet	16.04.2010	10.05.2010	0,01 €/kg	2.065.227,76 kg	20.652 €	21,57%			
Dolomit	16.04.2010	10.05.2010	0,03 €/kg	312.989,53 kg	9.390 €	9,81%			
Feldspat	16.04.2010	10.05.2010	0,12 €/kg	29.347,66 kg	3.522 €	3,68%			
Filtstaub	16.04.2010	10.05.2010	0,12 €/kg	1.848,94 kg	222 €	0,23%			
Glaßgries	16.04.2010	10.05.2010	0,23 €/kg	7.553,88 kg	1.737 €	1,81%			
Kalk	16.04.2010	10.05.2010	0,10 €/kg	206.812,31 kg	20.681 €	21,60%			
Kohle	16.04.2010	10.05.2010	0,28 €/kg	1.848,94 kg	518 €	0,54%			
NaSO4	16.04.2010	10.05.2010	0,01 €/kg	344.728,38 kg	4.240 €	4,43%			
Sand	16.04.2010	10.05.2010	0,01 €/kg	2.185.900,75 kg	21.859 €	22,84%			
Soda	16.04.2010	10.05.2010	0,02 €/kg	680.250,38 kg	12.925 €	13,50%			
Summe					95.755,78 €	100,00%			40,13%
Wasser									
Wasser	16.04.2010	10.05.2010	0,45 €/kg	98.001,21 m3	44.461 €	100,00%			18,63%
Summe					44.460,54 €				
					238.617,71 €				

- The analysis functions of our energy management module provides complete recording of energy flows and the identification of potentials for cost saving
- Mobile applications help to identify approaches for optimization early and recurrently and to realize them sustainably
- A modern energy management system provides the complete display of energy flows and is the basis for a continuous improvement process.

Benefits

- Transparency of energy data
 - Exact assignment of energy cost and consumptions
 - Fast and early identification of divergences and power peaks
- Automated reporting of energy data
 - Reduced time effort and error avoidance
 - Optimization of cost control
- Reduction of energy cost
 - Energy management systems according to DIN EN ISO provide a cost saving factor of up to 30 % due to energy efficiency
 - Avoidance of power peaks
 - Possible potentials for tax benefits
- Sustainable management
 - Predictability as a result of the analysis of energy data from the past
 - Improvement of energy efficiency and reduction of the CO₂ emission
- Improved image
 - Better external presentation of the company
 - Credibility: a certification according to DIN EN ISO 50001 is an ideal approach for the communication of sustainable management and environment

Functions

- Evaluation of consumptions
- Use of calculation parameters for variable evaluation
- Energy controlling on the basis of key figures and evaluations
- Emission monitoring
- Efficiency assessment on the basis of cause variables
- Flexible, storable possibilities for evaluation
- Integration of existing data sources
- Saving of manual consumption values
- Reporting
- Evaluation of disturbances and downtimes
- Evaluation of cost sectors
- Options for visual display
- Validation and alarming of balancing groups
- Maintenance, support and trainings



Mobile applications provide support for energy management, access to master data, communication and delegation possibilities for the staff, fast overview with statistical evaluations and charts etc.



Plant Historian

Modular Software Suite

Over many years, the MES software series Plant Historian has been applied in international industrial enterprises in different countries in Europe, Asia and South America. Best practice has been the key for continuous development and improvement of Plant Historian.

The system can be connected to any kind of PCS/PLC/ERP system. Optimization potential can be early and continuously recognized and sustainably realized.

Benefits

- Company-wide central solution for the analysis and storage of process data
- Increased plant safety and availability (OEE)
- PCS independent, central infrastructure
- Identification of bad operation processes
- Cost saving concerning hardware, software licenses, service and support costs
- Predictive Maintenance
- Golden Batch Analysis, recognition of production patterns

Technologies

- Standardized PCS/PLC/ERP interfaces
- Independence of process control system
- Connection via OPC, printer interface of any control system/controls e.g. of Siemens, Emerson, Honeywell, ABB, Foxboro
- Long-term archiving – with optimized memory and runtime – of A&Es, operator interventions and batch protocols
- Central SQL database, central application server
- Scalable, intuitive system



	Plant Historian AM	Plant Historian AR	Plant Historian PDA	Plant Historian DIG	Plant Historian RM	Plant Historian EM	Plant Historian MDE	Plant Historian OEE	Plant Historian HMI	Plant Historian SB	Plant Historian PM	Plant Historian PPS	Plant Historian PTT
	Alarm management for increased plant security	Alarm rationalization for increased plant safety	Process data archiving: recording, analysis and storage	Digital data recording	Reporting and report management	Energy controlling and monitoring according to ISO 50001	Machine data acquisition	Overall equipment effectiveness	Visualization of manufacturing/production processes	Digital shift book	Predictive Maintenance	Production planning scheduling	Traceability of process data
Benefit	<ul style="list-style-type: none"> • Increased plant safety and availability • Identification of bad procedures • Support for alarm reduction 	<ul style="list-style-type: none"> • Identification of bad operation processes • Statistical evaluation of alarm frequencies and reaction times 	<ul style="list-style-type: none"> • Quality management and process optimization • Transparent recording of process data • Transparent visualization of the plant condition 	<ul style="list-style-type: none"> • Safe and secure data recording, reactions and data storage • Support for internal and external audits • Escalation in cases of limit value violation and indication of process instructions 	<ul style="list-style-type: none"> • Company-wide, central solution for report management • Relevant information for different recipients • Central tool for the distribution of information 	<ul style="list-style-type: none"> • Transparency of energy data • Automated reporting of energy data • Reduction of energy cost • Sustainable management • Enhanced image 	<ul style="list-style-type: none"> • Transparent presentation of the machine status • Immediate identification of divergences • Increase of machine availability 	<ul style="list-style-type: none"> • Transparent presentation of production data • Immediate recognition of divergences • Increased availability due to direct information forwarding concerning the machine/plant status 	<ul style="list-style-type: none"> • Flexible plant monitoring • Abstract display of plant status and information aggregation • Networked presentation of machine and production units • Transparency due to information networking (Big Data) 	<ul style="list-style-type: none"> • Reduced data acquisition, reporting and research efforts • Options for statistical evaluation • Easy handling 	<ul style="list-style-type: none"> • Reduction of downtimes • Predictive planning of maintenance measures • Planning reliability in production • Easier capacity planning concerning availability of plants, material and staff 	<ul style="list-style-type: none"> • Support for production planning (orders, material, staff) • Warehouse supply and demand information • Order control • Structuring of the manufacturing process • Capacity planning 	<ul style="list-style-type: none"> • Traceability of the collected process data • Error-free flow of material to the highest possible extent • Planning and control of the material flow • Right material at the right production unit
Functions	<ul style="list-style-type: none"> • A&E frequency analysis and distribution • KPI reporting according to ISA 18.2, NAMUR NA102 and EEMUA 191 • Direct alarm forwarding per SMS, mail of phone • Visualization of upcoming/past disturbances 	<ul style="list-style-type: none"> • Intuitive classification of alarms • Basis for the Management of Change process (MOC) • Validation of rationalization measures (comparison of planned and actual data) • Automatic generation of alarm master data 	<ul style="list-style-type: none"> • Numerous analysis tools and display options • Trend display with visualization of the related messages issued by the process control system and direct indication of limit value violations 	<ul style="list-style-type: none"> • Manual or automated collection of manual values • Manual or automatic reporting • Numerous analysis tools and possibilities for visualization 	<ul style="list-style-type: none"> • Output of reports as PDF or in Excel • Automated distribution to predefined recipients • Any type of reporting: shift reports, daily and monthly reports etc. 	<ul style="list-style-type: none"> • Consumption analysis • Evaluation of cost centers • Visualization options • Validation and alarming of balancing management 	<ul style="list-style-type: none"> • Acquisition of technical operating data • Calculation of key figures and benchmarking • Transparent monitoring and analysis of machines 	<ul style="list-style-type: none"> • Recording of technical operating data • Calculation of key figures and benchmarking, e.g. overall equipment effectiveness • Transparent monitoring and analysis of machines 	<ul style="list-style-type: none"> • Flexible dashboarding per drag & drop • Personalized layout saving • Multiscreen splitter • Display of alarms & events, process or machine data, OEE key figures on one surface 	<ul style="list-style-type: none"> • Documentation and recording of shift events • Individual generation of shift plans • Revision safety • Hierarchical report function 	<ul style="list-style-type: none"> • Monitoring of all data related to maintenance • Recognition of maintenance tendencies as a result of data accumulation (Big Data) • Recording of maintenance measures 	<ul style="list-style-type: none"> • Production control with order sequencing • Planning of material requirements • Lead time scheduling • Time and capacity planning • Inventory management • Availability check 	<ul style="list-style-type: none"> • Components suited for melting or foundry (temperature and dirt-resistant and unaffected by vibrations) • Intuitive user interface

