

# Energy Monitoring System (Model ENERMON)

ENERMON

## System description

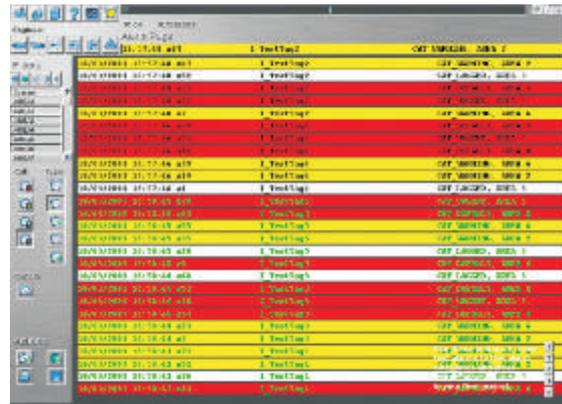
Masibus 2150 Power cum Energy Meters meters provide higher and sustained accuracy and reliability. These front end instruments provide communication port which is hooked up directly to the standard PC running ENERMON software (EMS-SCADA) which can generate good data-base along with history data. This provides information without holding-up the time of valuable maintenance personnel.

ENERMON can connect to Masibus' as well as all the 3<sup>rd</sup> party sophisticated energy/ power meters. The data from the meters are taken on RS-485/ ethernet bus and are communicated over SCADA work station, through suitable converters. The Energy Monitoring System works on master-slave configuration, where ENERMON is the master device and intelligent power meters are the slave on RS-485/ ethernet bus.

ENERMON displays energy parameters, its computation and final report generation on screen. Various parameters from different meters are displayed on same page which makes comparison easy. ENERMON's distributed trending feature handles a large number of variables without compromising on performance or data integrity with customizable views. Any electrical variable from any energy meter are made to be logged and trended.

ENERMON system also has trend compare facility where sample values are plotted against time on the same graph where real time trends were plotted, so as to provide indication of process behavior. Trend sampling rate are selectable between 1 second to 24 hours. Networking is the key ingredient of ENERMON to centralized monitoring of distributed application.

All features described are available on WAN/LAN. One can monitor autonomous area within the plant separately using any computer on the network. All the reports, alarm, trend are available in HTML format.



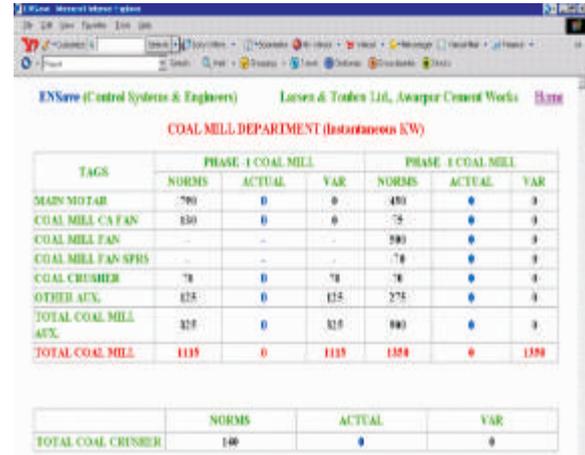
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## Performance

ENERMON utilizes dynamic optimization and pre-emptive multitasking that optimizes the performance of the system. The communication is demand-based that reads only those tags that are requested by Client. The I/O server rationalizes requests from client and reduces needless communication giving screen update time faster than standard systems available in the market.



ENSave (Control Systems & Engineers) Laxmi & Tandon Ltd, Awarner Cement Works

COAL MILL DEPARTMENT (Instantaneous KW)

TAGS	PHASE - I COAL MILL			PHASE - II COAL MILL		
	NORMS	ACTUAL	VAR	NORMS	ACTUAL	VAR
MAIN MOTOR	790	0	0	480	0	0
COAL MILL CA FAN	830	0	0	75	0	0
COAL MILL FAN	--	--	--	290	0	0
COAL MILL FAN SPRS	--	--	--	70	0	0
COAL CRUSHER	70	0	70	70	0	0
OTHER AUX.	125	0	125	275	0	0
TOTAL COAL MILL ACT.	320	0	320	990	0	0
TOTAL COAL MILL	1115	0	1115	1350	0	1350

	NORMS	ACTUAL	VAR
TOTAL COAL CRUSHER	100	0	0

## Features

- The Energy Monitoring System requirement is report intensive and ENERMON is developed to provide different reports to different sets of people.
- The metered data is gathered automatically, eliminating transcription errors and thereby provides real time energy.
- Computation and allocation of distribution losses are easy to know with ENERMON.
- Possible to locate inefficiencies from energy consumption pattern.
- Timely trouble shooting and stoppage of inefficiencies/ wastage based on reports leads to reduction of energy usage and costing.
- **Alarms:** The ENERMON generates alarms that are provided with detailed information in a clear and concise format with day, date, time and value.

