



AMS Performance Monitor - An Overview

Analyse the operating efficiency of process machinery remotely

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AMS Performance Monitor – An Overview

Deliver your Optimum Efficiency in Maintenance Management

Minimising unplanned shutdown and increasing availability of plant equipment is the primary goal to maximise profits.

Maintaining the efficient operation and performance of plant equipment is essential to the production of any process manufacturing facility. Maintenance should no longer be viewed as a necessary expense, but should be treated as a strategic contribution to the plant's bottom line.

To improve maintenance planning and compete more effectively, a comprehensive performance monitoring solution improves equipment efficiency, consequently increasing throughput and significantly reducing maintenance costs. The use of highly accurate model-based technology with the latest software, via the Internet, provides the essential tools to maximise profit margins.

Emerson Process Management, a leader in products, services and solutions that measure, analyse, control, automate, and improve process-related operations, presents AMS Performance Monitor - a revolutionary e-based solution designed to deliver your optimum efficiency.

AMS Performance Monitor allows you to;

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- ✓ Run your process more efficiently.

 - ✓ Improve your operating margins.

 - ✓ Avoid unnecessary shutdowns.

 - ✓ Improve your maintenance management decisions.

Improve Equipment Performance to Increase Profitability

AMS Performance Monitor is designed to maximise profits by minimising unscheduled equipment downtime. The principle purpose of AMS Performance Monitor allows operators to troubleshoot equipment problems remotely and determine when to plan maintenance or cleaning schedules to extend run times and maximise throughput.

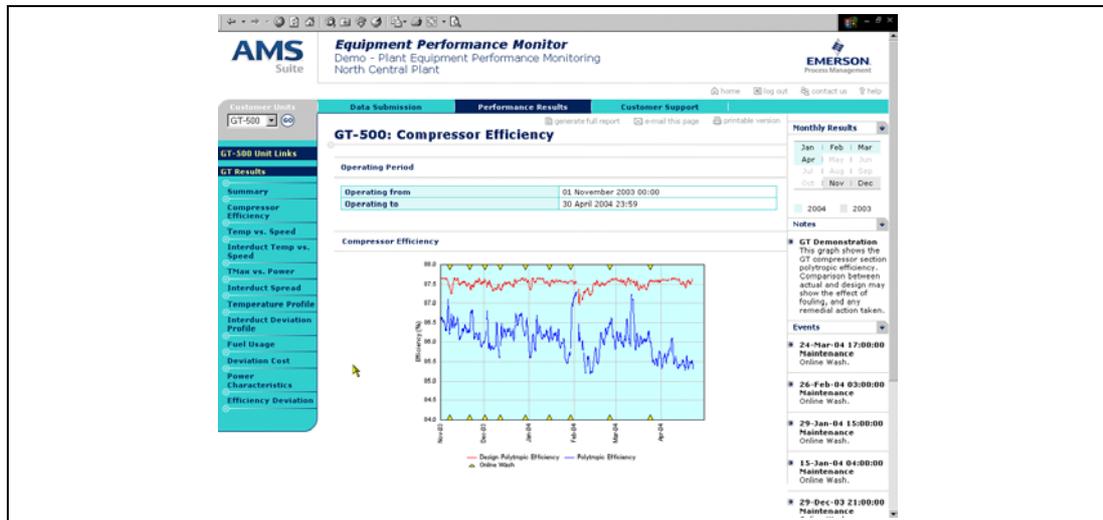
Improve Maintenance Management Decisions

AMS Performance Monitor is appropriate to track operating performance against targets and highlight potential causes of downtime and production inefficiencies. AMS Performance Monitor will pinpoint any degradation of performance, enabling preventative action to take place, thus assisting in optimising the plant's planned production.

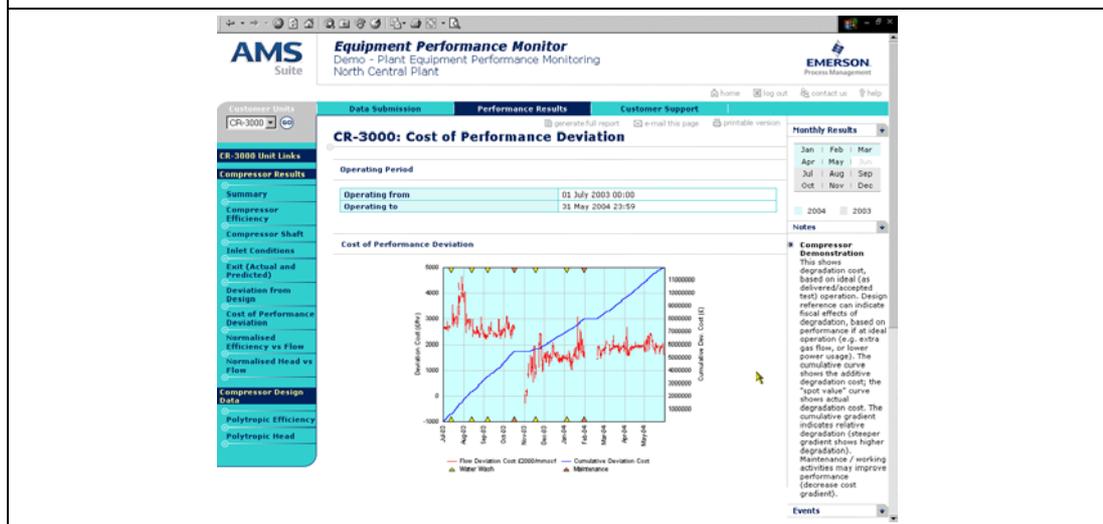
AMS Performance Monitor addresses the growing demand for reliable equipment performance monitoring to meet the needs of customers switching from routine to targeted maintenance programs, thereby maximising the utilisation of their process assets.

Since AMS Performance Monitor uses Internet technology, users can analyse the operating efficiency of plant equipment anywhere in the world to troubleshoot equipment problems remotely and at low cost.

AMS Performance Monitor, which forms part of Emerson Process Management's comprehensive asset optimisation solution, has been successfully deployed and is providing quantified benefits throughout the process manufacturing industries.



Typical AMS Performance Monitor screen shows the compressor efficiency performance.



Typical AMS Performance Monitor screen shows cost of compressor degradation, based on original performance.

AMS Performance Monitor allows you to;

- ✓ Reduce operating costs, improve yields, and maximise production with improved maintenance decisions.
- ✓ Optimise cleaning and schedule maintenance cycles to extend run times.
- ✓ Improve equipment efficiency and thereby increase capacity, and profitability.
- ✓ Improve operating performance and reliability.
- ✓ Minimise unplanned equipment downtime avoiding costly shutdowns.
- ✓ Determine the underlying effect of equipment degradation (including costs).
- ✓ Detect faulty instrumentation.
- ✓ Plan for maintenance expenditure.

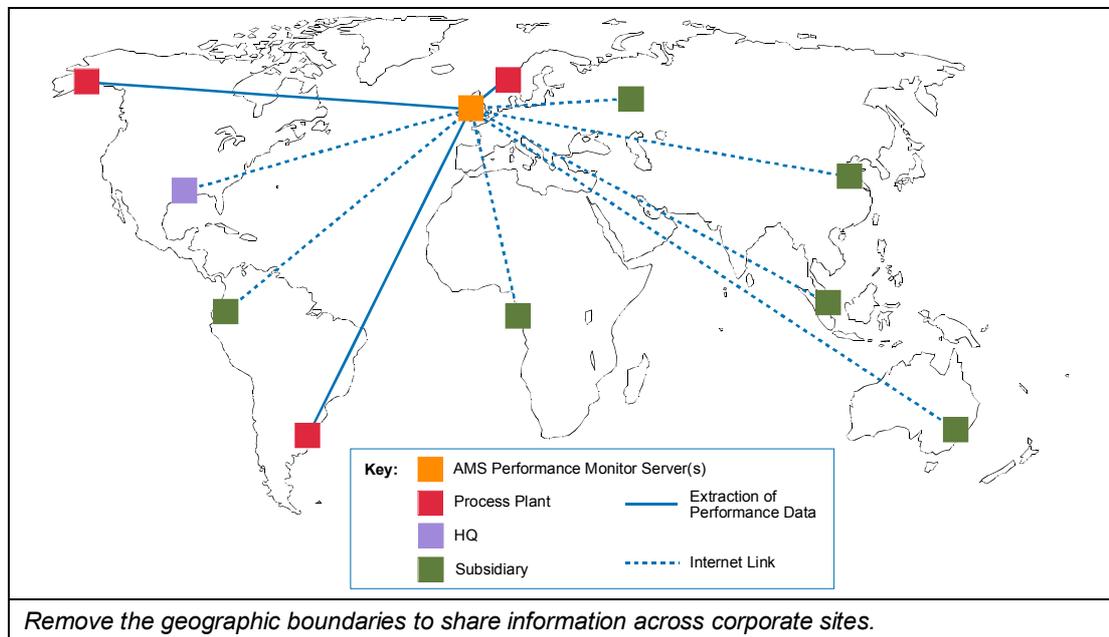
Analyse Equipment Performance from anywhere in the World

Knowing the health and welfare of your critical plant equipment, in the field, is crucial to sustain throughput. The AMS Performance Monitor system provides the user interface and tools required for monitoring plant equipment remotely.

Remote Access

AMS Performance Monitor combines the power of web technology to collect, model, process and present performance monitoring information about critical plant equipment to operators around the world. Whether it's for equipment on an oil platform in the Gulf of Mexico or a process plant in Asia, AMS Performance Monitor can be accessed quickly and easily at anytime where the user has access to the Internet.

AMS Performance Monitor brings performance data to multiple users, rather than forcing them to go to the data, allowing both machinery and maintenance experts from around the world to diagnose problems, and implement solutions immediately.



System Requirements

Whether remotely determining the effect of maintenance activity, comparing aggregated performance against target, or leveraging technical expertise from other corporate locations, users can view information using a standard web browser, without the need for special client-side software.

Data Security

Data access is restricted to only those who need information from the field. All data is protected from third party interception by utilising industry-standard Secure Sockets Layer (SSL) technology, enabling you to conduct your business with complete peace of mind.

AMS Performance Monitor enables users to;

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- ✓ Access operating performance results anywhere in the world.

 - ✓ Share information globally with ease - leverage expert knowledge in central locations and drive best practices.

 - ✓ Compare performance across multiple units/plants and keep an archived history.

 - ✓ Automatically detect, determine the underlying causes and record deviations against target.

 - ✓ Produce accurate reports against performance targets to management.
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Automate Monitoring Reporting

Flexibility is the key with AMS Performance Monitor. There may be alternative Performance Monitoring systems available but none provide the value and flexibility found with AMS Performance Monitor.

Although many process manufacturing plants simply do not carry out equipment performance monitoring in a structured and reliable approach, alternative systems installed on-site, require a significant investment in software and hardware, and require skilled technicians to oversee the monitoring infrastructure.

Data Accuracy

The AMS Performance Monitor approach uses rigorous model-based technology that form the basis of sophisticated Real-Time Optimisation Systems, which contribute to the highly accurate results presented to the end-user. Unlike AMS Performance Monitor, alternative systems do not take into account instrument drifts, adverse data, or the accuracy of the data used in the performance calculations.

Using AMS Performance Monitor allows organisations to benefit from sophisticated modelling techniques without the need to invest in specialised software, databases, operating systems, hardware and support personnel. AMS Performance Monitor has proved to reduce the total cost of ownership of alternative systems by up to 70%.

Eradicate Distance Barriers

AMS Performance Monitor addresses the needs of organisations to leverage the Internet in daily manufacturing operations by delivering the ingredients most necessary for manufacturing success - consistent and accurate, 24/7 information available to all staff within an industrial enterprise. AMS Performance Monitor eliminates the time and distance barriers between plant staff and assets, and allows engineers to focus on improving the operational performance of production facilities.

Equipment Applications

The services of AMS Performance Monitor can be applied to and provide accurate monitoring of equipment such as:

✓ Boilers	✓ Heat Exchangers
✓ Compressors	✓ Hydraulic Turbines
✓ Expansion Turbines	✓ Pumps
✓ Furnaces	✓ Steam Turbines
✓ Gas Turbines	

The Process of Remote Monitoring

Designed to provide a fully outsourced solution, AMS Performance Monitor requires no customer configuration. The complete process of data transfer between an historian installed on-site, and the calculation and production of accurate results, can be entirely managed using AMS Performance Monitor.

Leverage Outsourced Technical Expertise

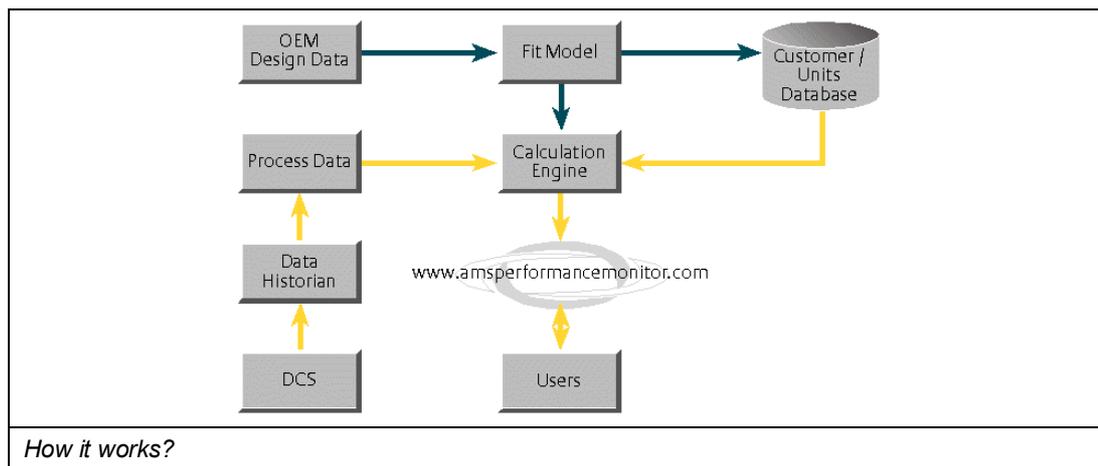
AMS Performance Monitor acts as an intermediary by facilitating a remote, centrally managed system allowing organisations to leverage the technologies, processes, and expertise of enterprise applications without having to invest in the technology.

Using this system will allow you to;

✓ Minimise the total cost of software ownership.
✓ Focus on other core competencies / strategic objectives.
✓ Eliminate the uncertainties of post-implementation software expenditures.
✓ Use a centrally maintained solution where all upgrades are passed to the customer at no additional charge.

The AMS Performance Monitor Cycle

AMS Performance Monitor uses a rigorous, detailed first-principle mathematical model, including Original Equipment Manufacturers (OEM) design or acceptance data, to uniquely characterise how the plant equipment should perform as 'new'. AMS Performance Monitor uses this unique model in the calculation process to generate the performance indicators.



Process data is collated and uploaded periodically from the Data Historian and applied to mathematical and statistical calculations using data reconciliation and parameter estimation technology to eliminate adverse data. This conditioned data is then applied to the calculation engine (the model) to generate the performance indicators and provide the monitoring results.

All results are displayed within a secure customised web environment for easier examination and comparison by plant and corporate personnel. Depending on your level of authorisation customers can access results on a company-wide, plant-wide or individual unit basis anywhere in the world.

A full guided tour is available at www.AMSPerformanceMonitor.com/tour

Track Equipment Performance and Identify Improvement Needs

Regardless of your company size or industry, AMS Performance Monitor provides valuable market intelligence to make your business more productive and profitable. This intelligence bridges the gap between operations and maintenance so improved reliability and availability of assets can be sustained.

AMS Performance Monitor is designed and ready for real environments. For a low monthly fee this solution enables the seamless integration of providing information, securely, about the operating status of each piece of plant equipment.

Functionality

AMS Performance Monitor provides the market intelligence for personnel to access detailed performance results and tools to;

- ✓ Access overall, summarised, tabular and graphical representations of performance data and deviations for plant equipment.
- ✓ View archived, monthly and customised performance trends.
- ✓ Analyse monitoring history to determine root causes of performance problems.
- ✓ Record reasons for deviations and comments on operational data for analysis by colleagues.
- ✓ View original equipment design data as an easy mechanism for reference to current performance.

Key Capabilities

The key capabilities of AMS Performance Monitor allow you to;

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|---------------------------------------------------------------------------------------|
| ✓ Exchange data / intelligence between local, outsourced and corporate divisions. |
| ✓ Respond faster to changing conditions. |
| ✓ Benchmark operational performance vs. sister units or plant sites. |
| ✓ Analyse the operational history to determine the root causes of equipment problems. |

AMS Performance Monitor is pioneering Emerson's Asset Optimisation solutions to unlock the hidden value in information intelligence that is critical to sustain profitability.

AMS Performance Monitor conquers the restrictions between corporate level solutions and today's technological advances. Overcoming this barrier enables organisations and subsidiaries to leverage information from remote locations to achieve corporate business goals.

Emerson - Leader in Field Device Management and Services

AMS Performance Monitor forms a key part of Emerson Process Management's family of Asset Optimisation solutions designed to make significant improvements in plant reliability. These solutions combine world-class services with innovative technologies to improve process availability, increase productivity, and reduce total cost-of-ownership.

The Asset Optimisation family changes the way you see your plant by enabling you to forecast maintenance activities rather than merely reacting to situations. This suite of solutions can streamline daily maintenance activities and easily access, monitor, and record field device information.

With Emerson's industry expertise and services, we pull together work processes, project management, and technology to sculpt your facility into the most efficiently run and well-maintained operation possible.

Emerson and AMS Performance Monitor is pioneering the way forward to deliver your plants' bottom-line.

Further information

A full guided tour is available at www.AMSPerformanceMonitor.com/tour	
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