

2008 World Electric Drives Frost & Sullivan Award for Excellence in Condition Monitoring Of the Year

Award Recipient – ABB Group

Award Description	Research Methodology	Measurement Criteria
<p>The Excellence in Condition Monitoring of the Year Award is presented to a company that has demonstrated excellence in its market by successfully offering a highly focused product for efficient monitoring of assets. The Award recognizes the company's dedicated commitment to developing a successful service or product to meet customer needs prevailing in the market. Additionally, the product has to possess additional features such as, scalability, security, and cost efficiency to ensure market success.</p>	<p>To choose the recipient of this Award, the analyst team tracks single product or service line companies in the marketplace, paying special attention to those who have demonstrated exceptional performance with their specific offering during the base year. This is primarily accomplished through interviews with market participants and market analysis in order to gauge the success of the company within its niche. Other elements considered include the company's position within the specific segment, its ability to compete against multi-segment players and company growth during the base year.</p>	<p>In addition to the methodology described, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this Award has excelled based on one or more of the following criteria:</p> <ul style="list-style-type: none"> <li>• Reduction in operational costs while maintaining high levels of satisfaction.</li> <li>• Responsiveness to customer needs.</li> <li>• Monitoring and addressing customer feedback.</li> <li>• Effective life cycle management of drives.</li> <li>• Scalability of the product for monitoring other assets.</li> <li>• Security of data.</li> <li>• Simple, fast and efficient operability</li> </ul>

The 2008 Frost & Sullivan Award for Excellence in Condition Monitoring of the Year is conferred to ABB Group (ABB) in the World electric drives market. The Award is presented to ABB in recognition of its brilliant condition monitoring system, The DriveMonitor™. The DriveMonitor™, developed in December 2005 by ABB Medium Voltage (MV) Drives, in conjunction with ABB Corporate Research has been accepted widely with nearly 100 installations worldwide. The basic function of DriveMonitor™ is to continuously monitor the drive status and respond when that status alters. With DriveMonitor™, ABB experts go on-line and guide the customers' maintenance engineer through a fast and efficient fault-finding practice. Diagnostic procedures not only cover the converter but also other parts of the drive system as per customer requirements and preferences. The highly secure and scalable DriveMonitor™ system reduces customer downtime and maintenance cost considerably over the product life cycle.

**Effective Life Cycle Management of Drives - The DriveMonitor™**

The DriveMonitor™ is designed for the effective life cycle management of drives. It is capable of providing uninterrupted monitoring and analysis of the drive state and operation. By supporting root-cause analysis (RCA), it helps customers to follow predictive maintenance paths. Along with these services, DriveMonitor™ also acts as the platform on which unique extension features are provided to the customers allowing operators to visualise the entire shaft state and application-related key performance indicators.

Even with such foolproof arrangement offered by DriveMonitor™ for the efficient working of its drives, experts on the ABB Support Line are always there for its customers' rescue in case any unforeseen fault creeps in. This reduces the downtime for its customers thereby cutting down maintenance costs, as the ABB experts remotely monitor the situation through Web-PC and offer solutions instantly.

### **High Scalability: Monitoring Other Assets**

DriveMonitor™ comprises a hardware and a software layer. The software layer is exceptionally flexible with regard to the series of assets with which it can be used, the configuration of diagnostic rules, its alarm and reporting functions and its data intake sources. DriveMonitor™ is inherently designed to be compatible with the Asset Monitor family of ABB, and hence is operable with the entire Asset Management portfolio. The DriveMonitor™ is designed to be used with a single drive and a large system as well, which means that several monitoring units can be configured in parallel to cover larger installations and the end result can be sent to a central control room PC for operator convenience. The process of monitoring assets thus becomes simple, fast and efficient with DriveMonitor™.

With additional diagnostic packages, DriveMonitor™ is capable of supervising other drive system components, such as main circuit breaker, transformer and the driven machine. Along with this, special packages related to the application, such as rolling mills, water pumps, and compressors can also be incorporated into the system. This development can be done at any point in time based on customer preferences. Scalability and flexibility are the prime advantages of the DriveMonitor™ system that makes it widely accepted across the global electric drives market.

### **Security of Data**

A vital reason behind the extensive acceptance of DriveMonitor™ among its customers is its safety feature. Every operation in DriveMonitor™ that is undertaken through remote access by ABB maintenance engineers is accomplished with complete customer consent. Additionally, remote access is made read-only just to ensure that the operation of the drive is not possible remotely. A firewall permits Internet access to the drive so that the user's chosen personnel and an ABB expert alone can gain access. Strict security procedures are followed and complex data encryption is used.

The DriveMonitor™ hardware, which is based on an industrial PC platform, is designed for remote accessibility and an extended life. The high security requirement for remote access is ensured by using the most safe and sound Virtual Private Network (VPN) solutions.

### **Low Operational Costs, High Satisfaction Level**

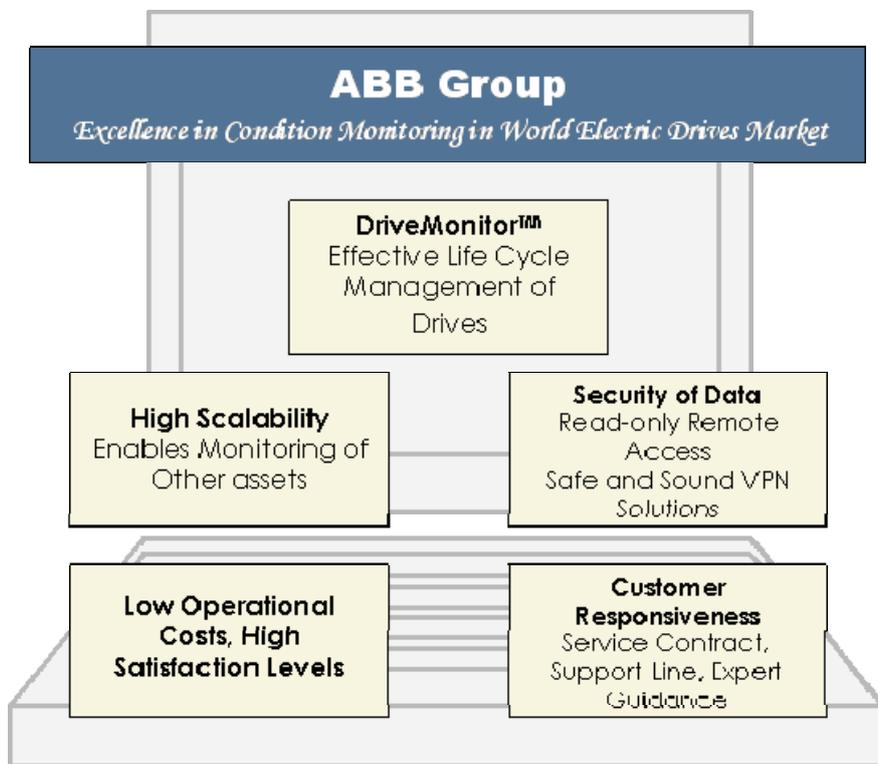
ABB Drives being highly powerful and configurable units in a process, their status is not merely related to a converter. It reflects several parameters that relate to the process status, such as shaft torque, phase current and phase voltages. These data provided by the drive unit and examined by DriveMonitor™ result in significant information on process status relating to process outliers, process drift and changes. With no additional hardware investment, drive data is plotted against conventional process information from the control platform. This whole process is facilitated by methodical and harmonized development of the ABB Asset Management platform, from the product as well as the system sides. The plant asset management systems offered by ABB are fully compatible with ABB product portfolio making the entire process automation complete and generating high-level benefits at low investment costs.

## Customer Responsiveness

For the convenience of customers, diagnostics with remote monitoring is included in a service contract with ABB, post warranty period. The package includes the use of DriveMonitor™ and covers all the necessary hardware and software components. The customer just has to provide an Internet connection for the DriveMonitor™ router, whenever remote connection is required. The ABB experts, available on the ABB Support Line, solve the problem by establishing read-only remote access through the Internet connection without much hassle to users and this keeps the downtime to a minimum.

Chart 1.1 illustrates the factors contributing to the emergence of ABB Group as the recipient of the 2008 Frost & Sullivan Excellence in Condition Monitoring of the Year Award in the World electric drives market.

### Electric Drives Market: Excellence in Condition Monitoring of the Year, ABB Group (World), 2008



Source: Frost & Sullivan

## Conclusion

The DriveMonitor™ satisfies all the requirements of a fine condition assessment system. It is scalable, to accommodate single or multiple assets; competent to acquire data from different sources, such as drive systems, control systems, vibration measuring tools, manual entries and the asset itself. In addition, it is also able to examine the assets on various complex factors such as vibration, temperature, electrical test, operation data, statistics and history. Careful assessment of the condition and performance of assets by the DriveMonitor™ allows implementation of predictive maintenance plans that considerably reduce maintenance costs, risk

of failure and downtime. Therefore, the 2008 Frost & Sullivan Excellence in Condition Monitoring of the Year Award is presented to ABB for being the foremost company in the World electric drives market to develop such a unique customer support system.

### **About Frost & Sullivan**

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### **About Best Practices**

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