

Improve Plant Availability through Supplier-Provided Remote System Diagnostics and Predictive Maintenance

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The Requirement: Improved Process Plant Availability

Process plants want to enhance the return on assets and improve the plant availability. With a view to reduce plant downtime and maintenance ex-

While manufacturing companies in India continue to invest in advanced automation technology, the shortage of qualified and competent professionals with the knowledge and skills required to maintain and diagnose automation equipment presents a challenge.

As demonstrated at a paper mill in India, web-enabled remote diagnostics and preventive maintenance services can provide a solution to this critical problem.

penditures, manufacturing companies adopt predictive maintenance philosophy. Automation systems play a critical role during plant operation and maintenance phases. Automation system uptime becomes important for manufacturing companies since any automation system failure has an adverse affect on production. But this requires knowledgeable and skilled maintenance professionals, for which there currently is a shortage, particularly in India.

The Challenge: Filling the Skills Gap in Maintenance Technology

While manufacturing companies in India continue to invest in advanced automation technology, the shortage of qualified and competent professionals with the knowledge and skills required to maintain and diagnose automation equipment presents a challenge.

While manufacturing companies in the country have access to a large pool of engineers graduating from technical schools and colleges every year, the more glamorous and lucrative IT industry lures away many students. Even among those who elect to study basic engineering disciplines – such as automation, electrical, electronics, and mechanical – few find it interesting to pursue automation maintenance in their careers. Furthermore, experienced professionals also find it attractive to emigrate to other countries where salary levels are relatively higher. Additionally, the remote locations of many process plants also act as damper in attracting skilled personnel.



Rapid technological advances call for continuous skill upgrading, and this adds further complexity. The lack of qualified technical professionals impacts manufacturing companies and automation suppliers alike.

The Solution: Remote Diagnostics and Predictive Maintenance

From both the supplier and end-user perspectives, these challenges are best addressed by supplier-provided remote diagnosis and maintenance support, facilitated by web technology. A manufacturing company can effectively improve automation system uptime performance by collaborating with its automation supplier through a remote services agreement.

Remote diagnostic and predictive maintenance services can improve automation system performance and uptime through regular system health checks that quickly identify and diagnose system faults before they can negatively affect production. Remote, supplier-provided services provide the following benefits for manufacturers:

- Ensure timely help in an emergency situation (24x7 supports)
- Save time and cost by avoiding unnecessary travel expenses of the supplier's expert
- Direct secure login facility helps the vendor expert to take control of the system and thereby eliminates the possibility of customer's inability to clearly define the problem
- Reduces the time for diagnosis
- Helps in regular updating of software patches, bugs, and such others

Remote Diagnostics in Action at a Paper Mill

As part of ARC's endeavors to track these trends in India, we recently had discussions with automation supplier, ABB. ABB briefed ARC about the Remote Diagnostic Services (RDS) package that it offers to JK Paper Mills at Songadh in Gujarat. The RDS include predictive maintenance and online diagnostic support.

Whenever a service requirement arises, JK personnel alert the ABB service engineer, who logs on to the ABB system via a secure firewall using a special login ID and password. This enables the supplier engineer to take control of the automation system to diagnose the problem and initiate appropriate corrective actions.

Additionally, ABB expert logs on to the system periodically (typically once in a fortnight) under the company's predictive maintenance support agreement. The expert remotely checks various critical parameters of the entire automation system at the plant site, tracks the process, and advises the customer on any preventive actions that could save time and money in the future.

Potentially, ABB's RDS Portfolio could help customers to minimize maintenance costs, maximize return on assets, and optimize process throughput.

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