

Abstract:**Remote Monitoring & Control**

Today's technology gives efficient and reliable ways to monitor and control distant and widely located sites remotely from the office. During recent years Remote Monitoring Systems have been replacing manual measurement recordings. Manual measurement recording is huge job which reserves expensive work forces for travelling between widely located and difficult to access sites.

Remote monitoring systems deliver rapid payback time on cost of manual measurements. Although, monitoring systems have also many other significant benefits like optimized assets performance, reduced incidents, longer lifetime, shared knowledge, better workers safetiness and lower carbon emissions.

Remote monitoring system collects field measurements automatically from all sites. Data is stored to centralized database server. Monitoring system can reduce measurement recording cycle from one or two months to some minutes or hours. There's no need for travelling thousands of kilometers per month on bad roads for site visits.

Collected field measurements are analyzed automatically and alarms are generated if values exceed defined alarm limits. Alarms can be seen in alarm views and can be automatically forwarded to maintenance personnel's e-mails or mobile phones. Site malfunctions can be identified immediately and repair actions can be started before it leads to critical defects.

Modern monitoring systems share the collected information in graphical trend and table data format for any authorized participant. Graphical interfaces can be seen with normal web browser from any existing PC in the company's Intranet. Users in different offices and work places can browse the latest and historical field measurements and alarm information on their desktop PCs.

Shared information increases important field knowledge in the company. Data can be used e.g. for analyzing, reporting and supervising performance and productivity.

Today's wireless technologies like Radio, GSM and TETRA networks allows easy and economical ways for monitoring remote sites. Ethernet LAN and Internet networks shares the real-time measurement data with all colleagues with minimal costs.

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