

MONITORING THE OVERALL EQUIPMENT EFFECTIVENESS IN AN INDUSTRIAL PROCESS USING DATA ACQUISITION SYSTEMS

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Abstract: Overall equipment effectiveness (OEE) quantifies how well a manufacturing unit performs relative to its designed capacity, during the periods when it is scheduled to run. OEE is a function of Availability (as a measure of percentage of scheduled time that the operation is available to operate), Performance (as a measure of speed at which the Work Center runs as a percentage of its designed speed) and Quality (as a measure of good units produced as a percentage of the total units started). Equipment's availability ($Availability = Available\ Time / Scheduled\ Time$) depends of organization plant maintenance (PM) strategy. The primary goal of maintenance is to avoid or mitigate the consequences of failure of equipment and by this base to grow the availability. The paper presents a model a solution and an case study concerning monitoring equipment's maintenance as a condition of OEE grow. The model is based on Enterprise Resources Planning software (SAP).

Key words: data acquisition, equipment effectiveness, monitoring, performance, ERP.