

Total Productivity Maintenance: A Tool to Reducing Downtime in a Plant

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Abstract

Total Productive Maintenance (TPM) has been examined in a number of studies as a tool in downtime reduction. The basic goal of TPM is to keep all equipment in top working conditions at all times in order to reduce or even eliminate delays during manufacturing processes.

In this study, Autonomous Maintenance, that is, utilizing the resources of operational personnel as a key component of TPM, is examined. Observations and data that are derived from two production lines in regard to maintenance issues are analyzed in the context of Autonomous Maintenance.

Data analysis using Microsoft Excel and Minitab was conducted and then the differences were noted and plotted on charts. The study was conducted over a period of one year, and by comparing shift reports for the operation lines to ascertain the reasons for stoppages during their runs, it was possible to determine the efficiency of Autonomous Maintenance as a reliable tool in TPM.

Keywords:

Autonomous, Maintenance, Productive, Downtime, Data

Biography:

Sanni Yusuf is an engineer who has spent years in the manufacturing industry as a practitioner and a consultant. He holds a Bachelor of Science degree, in Mechanical Engineering from the University of Juba (Sudan) as well as a Diploma from the Swiss School of Milling, Switzerland. His research interests include Computer-Aided Design of machine parts and assemblies, coding, process optimization, Lean, Six Sigma, production and manufacturing. He is a corporate member of the Nigerian Society of Engineers (NSE), the Nigerian Institute of Mechanical Engineers (NIMechE), and a fully registered engineer of the Council for the Regulation of Engineering in Nigeria (COREN). He is currently studying for Master's degree in Mechanical Engineering, Design and Production option at the University of Lagos, Nigeria and is an engineer in the Production Department of Honeywell Flour Mills PLC.