

Executive Summary

Loadstar, manufacturing division of Camoplast Solideal, manufactures solid and pneumatic tires, wheels and tracks under the Solideal brand. In today's competitive market, every manufacturing facility is striving to operate their plant assets at a maximum capacity or efficiency level all the time. In reality, decreased production rates, delays to production utilization and unplanned shutdowns are regular occurrences.

Solid Tire plant in Camoplast Solideal was expected to run for 27 days which will make 6200 Tonnes (\$14.1 million worth of finished goods) per month. When analysing the total production days, it was evident that solid tire plant was losing 4 days of production which is nearly 920 Tonnes. The downtime of the machines due to breakdowns in solid tire plant was 150% more than the expected value.

The importance of maintenance functions, and therefore of maintenance management, has grown tremendously. The project was "Reducing unplanned machine downtime by implementing a preventive maintenance process and manual work authorization system". This attempt enhanced the overall productivity and the profitability of the two solid tire plants of Camoplast Solideal.

During the problem analysing phase, it was found total unplanned downtime of the machines was accountable for 6.5% production loss. Unplanned downtime of four critical machines were accountable for 3.0% of total production loss which was worth of 47.5 million rupees. In the theoretical framework it was discussed the concepts of the preventive maintenance and the tactics of performing preventive maintenance work. Then author developed a framework for the study based on the literature reviewed and established that preventive maintenance has positive influence towards plant productivity.

The project objective was to reduce unplanned downtime by 25% (245 minutes = 4 hours) which will increase the production capacity by .17 days. Project implementation consisted of five project components. All the project deliverables were accomplished within four months period as planned initially. At the end of project, unplanned downtime reduced by 90% (869 minutes = 14 hours) which has increased the production capacity by .60 days.

Since project has exceeded its expected achievement in significant manner, organization has officially decided to roll this out throughout the two solid tires factories with an aid of CMMS (Computerised Maintenance Management System) tool.