

Simulation Modeling and Analysis of In-Plant Logistics at a Cement Manufacturing Plant in India

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Abstract : This paper presents the findings of successful implementation of Business Process Reengineering (BPR) of cement dispatch activities in a cement manufacturing plant located in India. Simulation model was developed for the purpose of identifying and analyzing the areas for improvement. The company was facing a problem of low throughput rate and subsequent forced stoppages of the plant leading to a high production loss of 15000MT per month. It was found from the study that the present systems and procedures related to the in-plant logistics plant required significant changes. The major recommendations included process improvement at the entry gate, reducing the cycle time at the security gate and installation of an additional weigh bridge. This paper demonstrates how BPR can be implemented for improving the in-plant logistics process. Various recommendations helped the plant to increase its throughput by 14%.

Keywords : in-plant logistics, cement logistics, simulation modelling, business process re-engineering, supply chain management

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