A Generic Materials and Operations Planning Approach for Inventory Turnover Optimization in the Chemical Industry

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Abstract

Chemical industries usually involve continuous and large-scale production processes that require demanding inventory control systems. This paper aims to show the results of the implementation of a mixed-integer programming model (MIP) based on the Generic Materials and Operations Planning Problem (GMOP) for optimizing the inventory turnover in a fertilizer company. Results showed significant improvements for Inventory Turnover Ratios and overall costs when compared with an empirical production planning method.

Keywords