Incorporation of Sustainability Considerations into the Industrial Operational Planning Systems
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Abstract
The core objective of the production planning systems, i.e. the most efficient utilization of various resources, is also the underlying concept of the production-integrated environmental protection. The modeling of the production planning and scheduling as optimisation problems and their solution through mathematical programming methods facilitate the accommodation of any operational constraints expressing environmental considerations, as well as the inclusion of any optimisation criterion expressing environmental issues. In this context, the main goals of the present work are to investigate the potential of integrating the environmental factor in the industrial production planning systems, to identify the interactions between the environment-related and the production planning parameters, and to recommend the accommodation of the environmental constraints and the corresponding optimization criteria in the well established production planning systems.

Keywords: Production Planning and Scheduling, Production Integrated Pollution Prevention, Mathematical Programming.

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