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Ontology-based production planning under the consideration of system robustness

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Abstract

Volatile markets and high customer requirements regarding schedule reliability increase the relevance of robust production planning. To achieve robustness in planning, system-inherent buffers are used. Buffers include resource capacities that are kept free to respond to changes. Targets other than achieving the production plan are not considered, so a trade-off between reliability and the further development of the manufacturing process is not possible. This paper presents a new approach for production planning based on robustness analysis that enables a multi-criteria optimization. An information system enables the company-specific design of the robustness analysis.

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