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Application of configuration principle on knowledge-based engineering for manufacturing system design

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Abstract

The design of manufacturing systems is a knowledge-intensive activity in which designers from various disciplines are involved, and the lack of effective support for the multi-disciplinary knowledge interaction among designers is one of the most critical reasons for the design failure. The authors intend to combine the configuration design principle with knowledge-based engineering to support the multi-disciplinary knowledge interaction during the intelligent design process. The paper firstly conducts an in-depth review of current intelligent design approaches. Then, the research gap in achieving multi-disciplinary knowledge interaction is pointed out. Finally, the multi-disciplinary knowledge configuration design approach is proposed.

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