

54th CIRP Conference on Manufacturing Systems

PDCA integrated simulations enable effective deployment of collaborative robots: case of a manufacturing SME

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Abstract

This paper elaborates on the role of computer simulations in the small and medium enterprises (SMEs) collaborative robot (cobot) implementation process. The cobot implementation process of a Danish small-medium enterprise (SME) is studied and the challenges along the way are highlighted. The main challenges discovered are underutilization of the cobot and inefficient work cell design. This paper argues that the use of computer simulations along with PDCA methodology can help to overcome these challenges. This case study validates that the use of simulation can help SMEs in an efficient work cell design and layout planning.

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Peer-review under responsibility of the scientific committee of the 54th CIRP Conference on Manufacturing System

Keywords: Collaborative robots; simulation and modelling; work cell design; layout planning; process optimization
