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Decision Approach for the Design and Sensor Integration of an LPBF Manufactured Gripper End Effector

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Abstract

In the context of increasing digitalisation of production, more and more data is required, while demands on the handling of production resources e.g. gripper for industrial robots are increasing. Currently, the potential of captured data is not being exploited and hardly any data is used with the help of production resources. In this paper, a decision process for the integration of a temperature sensor in Laser Powder Bed Fusion (LPBF) printed end effectors which considers all steps of the design is presented. The result is a 3D-printed adapted design of an end effector which is optimised regarding the requirement profile.

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