

Automated Generation of Rational Sheet Metal Forming Technology Variants at Process Engineering Stage

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Abstract

© 2017 The Authors. Published by Elsevier Ltd. The procedure of automated process reliability evaluation was developed in order to prevent recurrent defects in parts manufactured by die stamping. The procedure is based on the analysis of such factors as part design, material, its mechanical and physical properties; equipment parameters, tool performance, etc. The list of reliability factors may vary according to a type of operation as deformation process is different for each group of operations. The adjustment of stamping process reliability performance prevents any defects emerging during production of critical parts as early as the PPE stage. The automated control system for IE design at the PPE stage provides better part quality and lower production expenses thanks to IP reliability.

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Keywords

control, expert system, industrial process, reliability, stamping

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