World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Approach for an Integrative Technology Assessment Method Combining Product Design and Manufacturing Process

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Abstract : The systematic evaluation of manufacturing technologies with regard to the potential for product designing constitutes a major challenge. Until now, conventional evaluation methods primarily consider the costs of manufacturing technologies. Thus, the potential of manufacturing technologies for achieving additional product design features is not completely captured. To compensate this deficit, final evaluations of new technologies are mainly intuitive in practice. Therefore, an additional evaluation dimension is needed which takes the potential of manufacturing technologies for specific realizable product designs into account. In this paper, we present the approach of an evaluation method for selecting manufacturing technologies with regard to their potential for product designing. This research is done within the Fraunhofer innovation cluster »AdaM« (Adaptive Manufacturing) which targets the development of resource efficient and adaptive manufacturing technology processes for complex turbo machinery components.

Keywords : manufacturing, product design, production, technology assessment, technology management
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020