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DFSME: design for sustainable manufacturing enterprises (an economic viewpoint)

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Abstract

Design for sustainable manufacturing enterprise (DFSME) is considered to be a new ideologue regarding survival of manufacturing enterprise and it can also be considered as one of the most important solutions to deal with the existing global financial crisis. The DFSME is a systemic approach that simultaneously determines the aspects of sustainability and how they can be aggregated taking into consideration the globalisation issues. The problem addressed in this paper is how to present the concepts of sustainability to guide manufacturing enterprises analysts and designers with the most effective aspects for analysing sustainability. These aspects are: international issues; contemporary issues; innovative products; reconfigurable manufacturing systems; manufacturing strategies; business models; flexible organisation management; manufacturing strategies and performance measurements.

Based on these aspects, the sustainable model will be analysed and presented through covering all aspects of sustainable manufacturing enterprise and the sustainability assessment will be measured. The ultimate goal of this paper is to consider the needs of manufacturing enterprise throughout most of the world to be sustainable as well as to be globalised enterprises. This analysis shows that the DFSME is a very large task and should be taken into consideration as one aspect of the next industrial revolution.

Keywords:

manufacturing enterprises | sustainability | globalisation issues

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