

عنوان مقاله:

PREFORM SHAPE OPTIMIZATION IN FORGING PROCESS

محل انتشار:

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خلاصه مقاله:

In this research, preform shape optimization in forging process of a geometrically complex shape is investigated using the reduced basis technique (RBT) which is coupled by Taguchi design of experiments and finite element method is presented. The RBT is a weighted combination of several trial shapes to find the best combination using the weights for each billet shape as the design variables. A multi-level design process is presented to find suitable basis shapes at each level that can be used in the reduced basis technique. Each level is treated as a separate optimization problem until the required objective is achieved. Flash, i.e. excess material, is a industry requirement. The optimization process is started with simple basis shapes that are defined by their shape co-ordinates

کلمات کلیدی:

Preform shape optimization; Reduced basis technique; Taguchi design of experiment method, Finite element method

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