

TOPOLOGICAL OPTIMIZATION OF A REFRIGERATOR BED

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ABSTRACT

This paper deals with optimization of a Refrigerator bed. It describes development of a Finite element model consisting of structural members which are designed using basic principles of structural design. Topological optimization is applied to the bed considering volume as the objective along with Displacement as the constraints. Manufacturing constraints are considered to provide the manufacturability and interpretable design proposal. From the interpretations of Topological optimization, two designs are proposed one for Sheet metal and another for Plastic. The refrigerator bed Structure is optimized to minimize the mass and the cost.

KEYWORDS: optimization, Refrigerator bed, minimize the mass and the cost