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ANALYSIS OF A COVER PLATE OF HYDRAULIC CYLINDER USING FINITE ELEMENT METHOD

S. J. MODAK AND P. N. BELKHODE

Abstract

Hydraulic presses are used for pressing operations for converting one form of the flat metal sheet into sizable form. Main parts of this machine are end plate, cover plate and rods. Cover plate play an important role in the hydraulic press as it is subjected to more stresses. The complexity of load including nature and point of application, the cover plate becomes complex in engineering analysis. In Engineering analysis the system becomes complex due to complexity of load including nature and point of application. Hence for such situation designer has take help of some numerical technique to get value of field variable to reasonable level of accuracy which is best possible with finite element method. FEM is a numerical technique to find the field variables. The field variable is a basic parameter that can be measured and its derivatives are important for the modification of the design. Displacement field & its derivatives like strain and hence stress is important for modification of design. Other field variable is temperature, magnetic field & so on. This paper deals with the analysis of a cover plate of hydraulic cylinder using FEM techniques