

# Analysis of Hydraulic Press Machine for Mold Fast Separating

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## ABSTRACT

In this research, the 3D CAD model of EVA machines were built with CAD software for finite element analysis and motion analysis. The structure of the EVA machines are analyzed for improvement. In our analysis, we have compared elbow type mechanism with slide box type mechanism, in which 260 tons force from the four hydraulic cylinders are applied. Then, we found out where the strengths are weak and forced distributions of mechanisms when the forces are applied. In the motion analysis, the model are built to simulate the motion for the two mechanisms. The forces of the hydraulic cylinders are computed via simulations during the dies were separating. The data of the simulation results can be used by designer for the top cylinder design to meet their specifications. After the motion simulation of EVA machine, we measured the hydraulic pressures when EVA machine was moving. The position data of various hydraulic pressure are recorded and the time responses are checked. The measure data are used for analysis to improve our design.

Keywords : E.V.A.Foam-Form machinery、finite element、Foam-Form Machinery、Sliping-Mass-Type Machinery -vi

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