

## DYNAFORM5.2 의 사용자 편의성 및 솔버의 특성

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### A DYNAFORM 5.2 INTRODUCTION

#### Abstract

eta/DYNAFORM Version 5.2 software is an LS-DYNA based sheet metal forming simulation solution package developed by Engineering Technology Associates, Inc. This specialty CAE software combines the analysis power of LS-DYNA Versions 960 and 970 with the streamline pre and post processor functions of eta/DYNAFORM. These analysis codes and interactive functions are uniquely integrated to service the sheet metal forming industry in tooling design and development.

The program also maximizes traditional CAE techniques to reduce prototyping costs and cycle time for product development. eta/DYNAFORM's analysis engine is LS-DYNA, which is developed and currently supported by the Livermore Software Technology Corporation (LSTC) of Livermore, California. It is a general purpose, non-linear, dynamic, finite element analysis code utilizing explicit and implicit solver approaches for fluid and solid structural problems. This code has been developed for applications such as automobile crashworthiness, occupant safety, underwater explosion, and sheet metal forming. The bottleneck of the metal forming development cycle is the hard tooling design lead-time. The eta/DYNAFORM CAE approach simulates this tooling process and thereby reduces the tooling tryout time and the cost of producing high quality panels and stamped parts. Eta/DYNAFORM effectively simulates the four major design concerns in the tooling process: Binder Wrap, Draw Die, Spring Back, and Multiple Stage Tooling. These simulations enable engineers to conduct feasibility studies of a product design early in the design cycle. eta/DYNAFORM features well-defined tooling surface data to predict the performance of a panel stamp in areas such as cracking, wrinkling, and thinning, in addition to predicting skid mark and spring back effects.

**Key Words** : DYNAFORM , sheet metal forming, hydroforming, springback. Ls-dyna3D

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