

## عنوان مقاله:

CORRECTION OF DIE SURFACE TO COMPENSATE SPRINGBACK ERROR IN SHEET FORMING PROCESS BY  
INVERSE SPRINGBACK ANALYSIS

## محل انتشار:

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## خلاصه مقاله:

Shape error due to Elastic recovery of formed part in unloading known as springback, is one of the most important problems of tool design in sheet metal forming processes. Many researches have been performed for proposing an efficient method to decrease or compensate springback error in sheet forming processes. In this paper a modified algorithm for inverse modelling of springback in sheet bending process is presented based on explicit-implicit FE modelling. Also a modified DA approach is presented for compensating springback error in sheet bending process. By applying these approaches, an optimization algorithm for modification of die geometry to compensate springback error is presented. This algorithm is applied for asymmetric bending process and the results of both approaches is compared to each other. Also the accuracy of each approach is investigated by comparing the obtained final product by target geometry. The results have shown that both approaches have high accuracy and reasonable convergence rate in tool design trend by purpose of compensating springback error.

## کلمات کلیدی:

Inverse modeling, Springback, Sheet bending, Optimization, Tool design

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/79779>

