OASIS

Optimization of Addendum Surfaces In Stamping

ON GOING PROJECT

The Objective of "OASIS" project is to develop a software tool to simulate and optimize the stamping process using high limit elestiocity steel. This projet aims to reduce the time needed by engineers to design stamping process lines for high performance steel. Extending the use of such material in automotive applications will lead to fuel economy, and thus meet new requirements in terms of carbon dioxide emissions.

TECHNOLOGICAL OR SCIENTIFIC INNOVATIONS

- New optimization tools using game theory and multilevel approach will be developed. These developments will lead to optimzation tools that can be aplied to complex problems such as the use of new material or the the development of innovative concepts for stamping process.
- The second innovation deals with the form deformation methods during the optimization process. A method based on free form deformation and dynamic parametrization will be developped.
- The automatization of the parametric process taking into account the stamping process constarints (fabrication constraints) can be considered as an innovation.
- All these developments will be linked and integrated to obtain a complete suite for the automatic simulation and optimization of complex sheet forming process.

STATUS - MAIN PROJECT OUTCOMES

- Development and adaptation of optimization tools to complex stamping process.
- Automatization of parametric tools dedicated to stamping process.
- Developement of a plateform based on free softawre tools and designed to the simulation of stamping process.

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PROJECT DATA

Coordinator:
CS

Co-label:
I-TRANS

Call:
FUI9

Start date:
September 2010

Duration:
36 months

Global budget (M€):
4.6

Funding (M€):
2.4

Related Systematic project(s):
IOLS, EHPOC, SCOS, OPENHPC, PCS, CSDL