

SHEET METAL FORMING AND MECHANICAL CHARACTERIZATION

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ABSTRACT

The minisymposium is devoted to sheet metal forming topics both in the area of numerical simulation techniques as well as in the coupling with experimental techniques and design of manufacturing processes and components. Besides current challenges to the area, also core and classical research fields in deep drawing will be treated such as material modeling and parameter identification, numerical methods for the optimization and robustness analysis, formability issues, tooling, tribology and many other interesting aspects of sheet metal forming research and industrial practices.

Topics of interest include but are not limited to:

Materials

Material behavior, formability, failure, testing methods
Material models and new advanced materials.
Tool/die materials.
Wear, friction, tribology.

Processes

Deep-drawing, blanking, tube and blank hydroforming, stretch forming
Innovative and improved forming processes.
Innovative and improved tools & dies.
Rapid tooling and prototyping
Trimming & cutting.
Hot stamping.
Electromagnetic forming
Press and equipment
Defects analysis, springback and tool compensation
Process design, optimization and applications