

Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : Given names :

Status (prof., assistant prof., ...) :

Laboratory : Website address :

Institution : Website address :

Scientific competence of the supervisor:

Experimental methods - Thermo-viscoplastic behavior of metallic alloys - Finite element modelling - Optimization methods

Two major publications in the field proposed for the PhD :

1.
2.

Website address of the personal page :

Supervisor's email :

Description of the research work proposed for a PhD **Topic # (see list) :**

Title :

Subject :

Sheet metal forming processes are widely adopted in industries to produce thin-wall parts. Nowadays, with increasing demands for safety, lower weight or reduced fabrication costs, new materials and innovative forming processes emerge. In order to reduce the amount of the time-consuming trial-and-error processes, Finite Element (FE) simulations are intensively used to analyze the capabilities of sheet metal forming processes. To improve the accuracy of FE models, the material must be characterized under the process conditions. In sheet metal forming processes, the material can be deformed under multi-axial states and large strains, on a wide range of temperature. Hence, the identification of material parameters (hardening, yield criterion, damage or fracture models ...) under biaxial tensile state has become very efficient for the characterization of phenomenological models. In order to improve the existing testing machine, a new heating device based on the induction principle will be developed and integrated in the identification procedures of the research team. Tests on a wide range of strain rates and temperatures will permit to identify complex thermo-viscoplastic behaviours.

Keywords :

Expected collaborations :

Background required from the applicant :

Existence of a PDF file detailing the proposal ("yes" or "no") :

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