



Fatigue of TRIP steels

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TRIP (Transformation Induced Plasticity) steels are innovative materials in the automotive transportation industry. Modern cars contain components made of TRIP steels in order to increase safety especially in case of accident.

The project aims at understanding the role of the microstructure on the fatigue behaviour.

Low cycle fatigue tests will be carried out at room temperature using a hydraulic machine.

Flat specimens will be polished before fatigue testing in order to perform metallographic investigation. Both optical microscopy and scanning electron microscopy will be employed. Electron back scattered diffraction will be used to study the phase transformation as a result of cyclic plasticity.

The project involves a lot of experimental works and will be the opportunity to learn about physical and mechanical metallurgy.