

DURABILITY ANALYSIS OF IMPACT LOADED PARTS

Problem Description

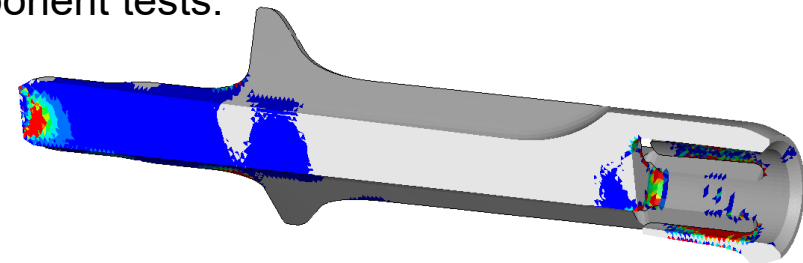
- Direct fastenings tools at Hilti are exposed to impact loads which lower the durability of such tools.
- One main task of simulation at Hilti is therefore durability analysis.



Stress distribution in a cross- section of a direct fastening tool

Objectives & Tasks

- Your task will be to test the fatigue solver of LS-Dyna, which is a transient FE- solver mainly used for crash analysis, for highly loaded components of direct fastening tools.
- Design and conduct fatigue tests.
- Calibrate LS-Dyna material cards (*Mat_Add_Fatigue).
- Compare and validate your simulation results with component tests.



Damage pattern of a tool component