

PROJEKTARBEIT (MA BI) CASE STUDY (MA CE)

Crack propagation analysis using X-FEM – Material

Fatigue assessment is an important issue for steel structures. Many structures, e.g. bridges, crane runway beams or wind energy supporting structures are exposed to fatigue loading and therefore predictable for failures.

In this case study the students should focus on the numerical crack propagation of steel structures using the X-FEM-Method in ABAQUS. The aim of the study is, to compare the crack propagation for different constitutive laws of the base material. The results will be presented in terms of crack path and crack propagation curves.

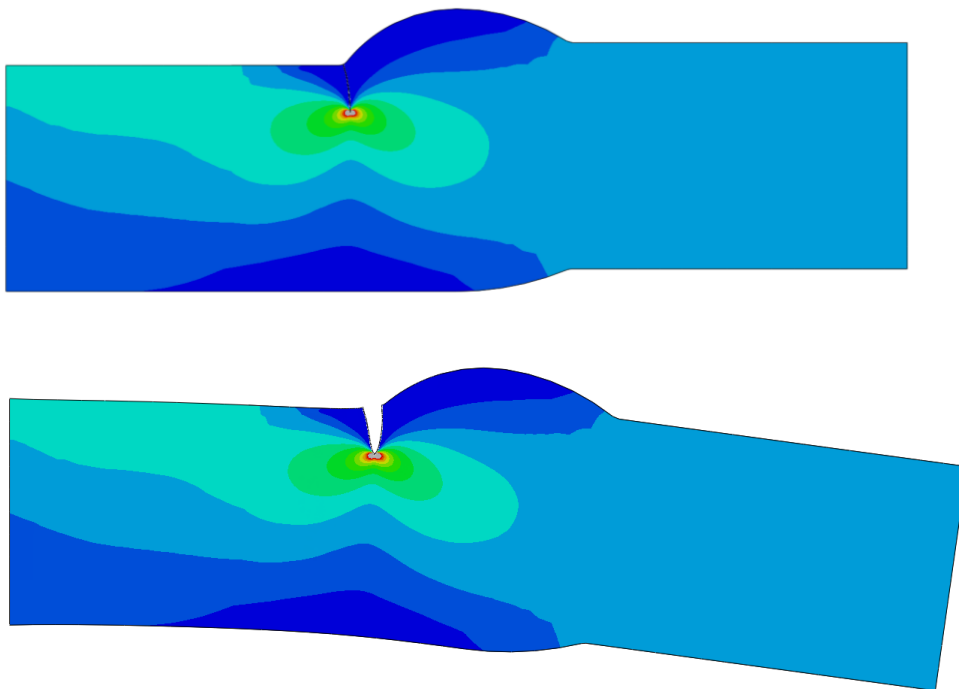


Fig. 1. Crack Propagation Analysis using X-FEM.

If you are interested in doing this case study in cooperation with our chair, contact Ms. Röscher (IC 5-81). Consultation hours are **Tuesdays and Thursdays** from **13:00 to 14:00**.

Bochum, July 2020