During the continuous casting process the steel strand is exposed to mechanical stresses. Some steel grades have a limited high temperature ductility, so it is necessary to know the critical loads. The high temperature bending simulator is used to investigate the load, which is applied to a steel ingot with liquid core.

**Work packages**

- Literature research on the topic high temperature behaviour of steels and mechanical loads
- Processing of mechanical data for use in FEM simulation
- Implementation of the temperature gradient in the steel ingot and related properties
- Simulation of the stress development in the growing strand shell
- Evaluation and comparison of the simulation with the test results

**Your profile**

- Student from the field of Materials Engineering, Computational Engineering Science, Mechanical Engineering, Computer Science or with similar backgrounds
- Knowledge in working with FEM simulation especially ABAQUS
- Knowledge in the use of JMatPro
- Preferably, basic knowledge in the field of metallurgy and mechanics

**Start**

Right now
(4 - 6 months)