

Masterthesis/Bachelorthesis

Shakedown analysis of high silicon alloyed nodular cast iron

Project

High silicon alloyed nodular cast iron is an innovative material offering both: high ductility and high strength. Many components in the automotive sector are made from this material. Due to varying wall thicknesses different microstructure occurs locally in these parts. In this thesis comparative strength predictions shall be performed using the shakedown theorem on representative volume elements (RVE).

Tasks

- Literature research
- Study and extension of existing code
- Modeling RVE and shakedown analysis

Requirements

- Interest in numerical methods
- Self-initiative and independent work



We are offering

- Very productive work environment and continuous support
- Ability to start immediately and fast completion

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