

Vacant thesis (BA, MP, MA)*

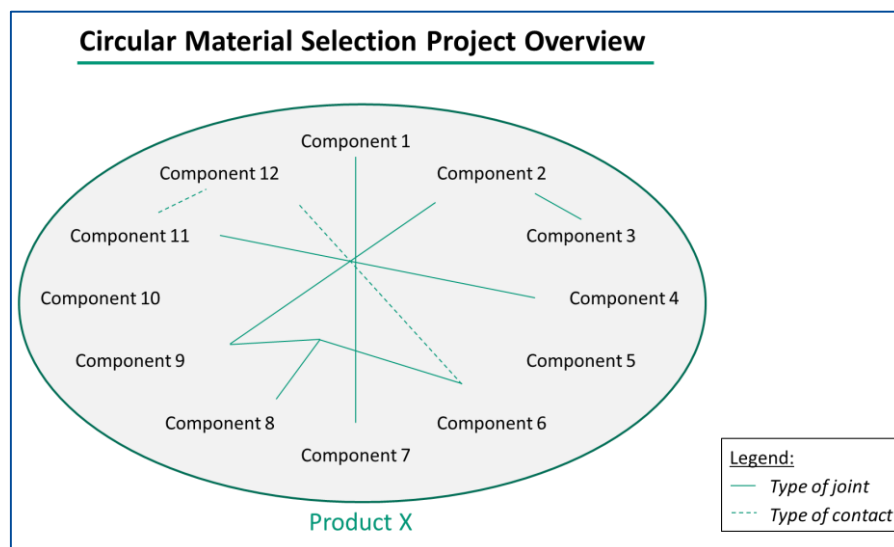
Recommendet for: B.Sc. SSE,

Circularity Engineering as an ab initio concept starts with the design for circularity of products, including circular material selection. While conventional material selection only puts limited emphasis on the interaction of components, its role is drastically increasing for circular products, designed for multiple use cycles. Topics of high importance for circularity engineering like longevity, corrosion resistance, wear resistance or recyclability are strongly dependent on component interactions.

This thesis will explore the role of component interaction for circular material selection.

Special focus will lie on:

- The role and existing consideration in conventional material selection processes
- The role, implementation and impact in circular material selection processes
- The definition of different types of component interactions
- The literature-based definition of sets of constraints and objectives for circular material selection in dependence of the component interactions
- Translating these insights into a tool supporting circular material selection, including the evaluation of circular material selection projects
- Validation, potential analysis and exploration of limitations with fictional case studies



Starts: As soon as possible

Timeframe: According to examination regulations

More topics on request!

* Forschungspraktikum = FP, Vertiefungspraktikum = VP, Study Project = SP, Bachelor Project = BA, Master Project = MP, Master Thesis = MA

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