

Bachelor- / Masterthesis

Topic:

Construction of an electroweeding device for Vegetation Control on Railway Tracks

Situation:

Railway tracks, in particular sidewalks and ballast, lose their functionality and safety through emerging plants. Current measures for vegetation control in the European rail network rely on foliar herbicides, mainly glyphosate that raises ecological and health concerns. Therefore, it is intended to replace chemical methods with environment-friendly and safe alternatives.

Electroweeding is a relatively new concept for vegetation control, where an electrical current is used to harm the plants. To validate this method, an applicator that fits a prototypical vehicle has to be designed. This applicator has to comply with all requirements coming from the railway sector and has to be versatile to be used under different conditions. In this work, a concept for such an applicator shall be developed and designed.

Assignments:

- Development of a concept for an electroweeding device that can be used on railway tracks
- Dimensioning and laying out the specific components
- Embodiment design and CAD-model

The work could be written in English or German.



Quelle: Iowa State University



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