

## Bachelor- / Masterthesis

### Topic:

Construction of a Hot Water Applicator 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.

Thermal methods, especially hot water has proven to have potential for further development. Compared to other alternative methods, its application is simple and reaches high velocities. Moreover no chemicals but only water is required, therefore, its use can be extended to nature protection areas. Unfortunately, this treatment is found mainly on street maintenance. A transfer of technology taking into account the railway infrastructure is planned. In this work, the conception and drawing of a hot water applicator for vegetation control on railway tracks shall be executed.

### Assignments:

- Assessment and extension of an already existing concept
- Dimensioning and laying out the specific components
- Embodiment design and CAD-model

The work could be written in English or German.



Credits : SBB CFF FFS

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