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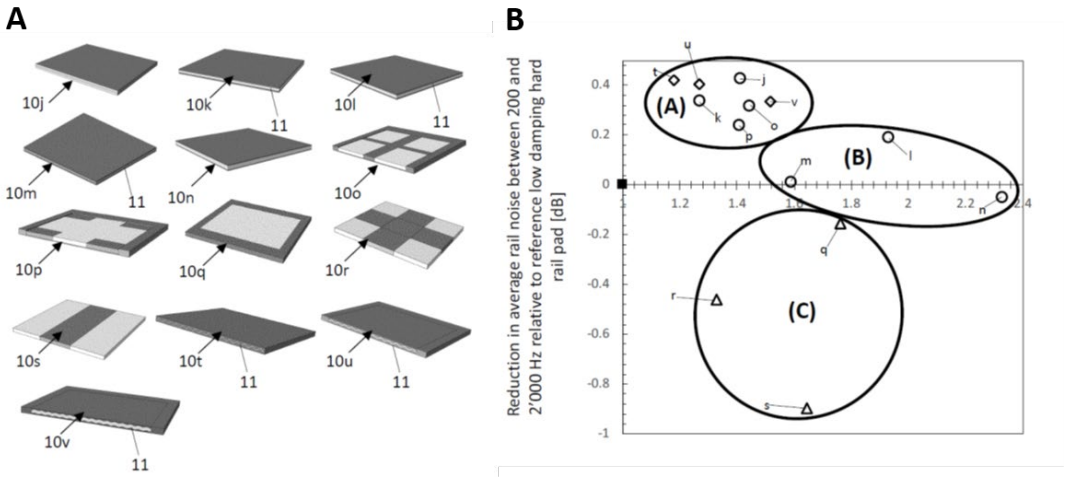
Licensing Opportunity

TTO – Technology Transfer Office

Noise reducing rail pad



A. perspective views of several embodiments of rail pad geometries according to the present invention; B. Pareto performance plot for the rail pad embodiment in Fig. A.

Ref. Nr

6.2049

Keywords

Rail, rail pad, noise, composite

Intellectual Property

WO2022/194404

Publications

https://laermforschung-eisenbahn.ch/site/wp-content/uploads/2022/09/01_BAFU_Expert2022_Plummer-Miessbacher.pdf

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Description

Rail pads are compliant (low stiffness) elastic sheets typically made of a polymer-based material inserted between the rails and sleepers. The rail pads function to protect the sleepers from transient static and dynamic loads caused by passing trains, but the elastic properties of the rail pad are also source of high intensity noise.

The invention is a composite rail pad that allows to significantly reduce airborne noise while fulfilling its primary purpose of track protection.

Advantages

Reduces rail vibration and radiation of airborne noise over a large part of the audible frequency range between 20 and 20’000 Hz.

Protects against track superstructure damage due to transient load peaks during train pass-by.

Limits low frequency ground-borne vibrations.

Applications

- Rail pads