

# MSC-PROJECT ON SURFACE DAMAGE TREATMENT

## MILLING AND GRINDING – COMPETING OR COMPLEMENTARY METHODS FOR RAIL SURFACE TREATMENT

Rail grinding has currently been in use for about 30 years. We can see many positive effects of rail grinding, but also some negative side effects. Rail milling on the other hand is a rather new form of surface treatment. In Sweden it has for example been employed in the Hallandsås tunnel. However, if it should be considered as an alternative to grinding, or as a complement when the surface damage is severe, is still an open question.

Current research indicates that influence on the rail material of the two methods differs significantly. This is not surprising since the methods differ significantly.

The thesis work is intended to go into detail on the thermomechanical influence the two methods have on the rail material. It is further intended to investigate the logistic and economic consequences of the two maintenance methods, including variations such as high-speed grinding.

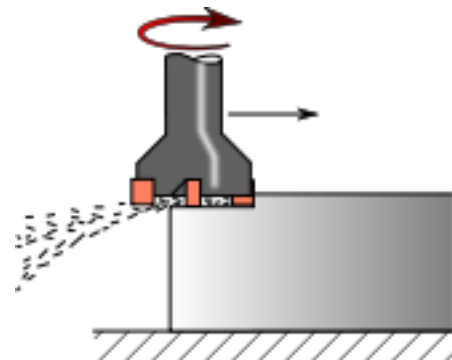


Figure 1: Highspeed rail grinding (left, CC-SA 3.0). Principle of rail milling (right, PD).

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