Railway Noise Abatement in Switzerland

What next?

19.03.2019

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Noise Abatement
What have we done?

→ Noise barriers with cost-benefit constraint: 275 km

→ Retrofitting freight rolling stock with composite brake blocks: 9462 Wagons

→ Noise insulated windows: 60’000 windows

→ Effect:
  • 2000: 240’000 persons above thresholds
  • 2025: 35’000 persons above thresholds
What was the effect?

Situation 2000

Prognos 2025
With ban of cast-iron brake blocks
without further measures

Prognosis 2015
with measures

Actual Situation 2015
What are we doing next?

- Ban of loud freight wagons
  - Consistency with revised TSI noise?
- Optimize track for noise and asset management
  - Rail Pad
  - USP and Noise
  \[\text{Test track}\]
- Perhaps some additional barriers
- Steel bridges with elastic support
- Determine rail roughness of track
  - Probably good enough because of increased and improved grinding

![Rail after regular grinding](image)

![Rail after acoustic grinding](image)
Risk

- Railway bonus may be put into question
  - Studies show that road and rail are similar in terms of annoyance
- In Switzerland between 5 and 15 dB (higher with less traffic)
- Effect in 2025
  - With rail bonus: 35’000 persons above threshold
  - Without bonus: 130’000 persons above threshold
  - Lines with little traffic are mostly affected
- But there are hardly any complaints
- Conclusion: Much has been done, but risks remain

Areas where additional noise abatement will be necessary