

Alpha Rail Team – Your Specialist for Rail Milling

Reprofiling and grinding of the rail profile in a single pass

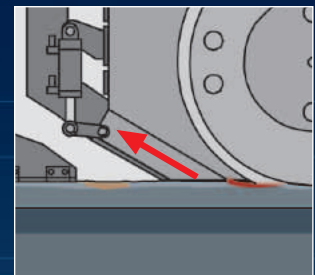
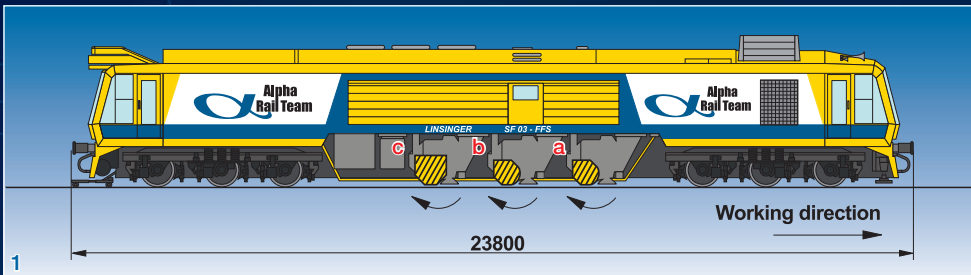
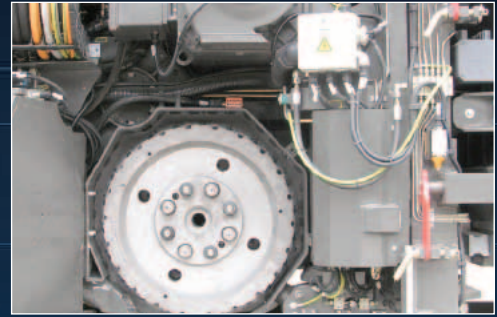


Get your rails into shape

The continuous strain on the track superstructure material by passenger and freight transport necessarily leads to wear and cracks on curves and straight stretches. This results in the formation of corrugation and waves, rolling contact fatigue and rail head deformation, which not only impairs travel safety and comfort, but also causes high noise emissions. Often a complete correction of existing damage requires the removal of much material from the rail head.

An alternative to laying new rails that is as intelligent as it is cost-effective is the regular correction of the rail profile combined with preventive milling. With this strategy, the profile deviations on the rail head are corrected, the surface quality is improved and the service life of rails is extended by up to 300%.

Alpha Rail Team, a collaboration between the leading experts in railway technology Vossloh Rail Services and Sersa Group, specialises in this new generation of rail milling and grinding technology. The Alpha Rail Team's rail milling machines, the SF03-FFS and SF03 FFS plus, enable reprofiling and grinding of the rail profile in a single pass.



Reprofiling in a single pass with the two machines SF03-FFS (Fig. 1) and SF03-FFS plus (Fig. 2): milling, milling, finish grinding.

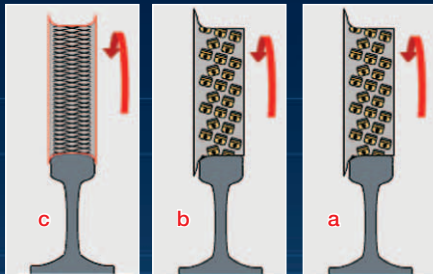
In a single pass

Our rail milling machines SF03-FFS and SF 03 FFS plus, with their integrated measuring technology for measuring longitudinal waves and transverse profiles, are equipped with two milling units placed one after the other and a grinding unit, which can be precisely controlled from a console in the driver's cabin. The abrasive dust is sucked into a separate container. An autonomy of more than 8 hours is guaranteed. Alternatively, the chips can be taken from the silo by an extendable conveyor belt and loaded onto a four-axled flat wagon. In this case the autonomy is unrestricted.

Milling, milling, finish grinding!

Thanks to state-of-the-art technology the operating procedures of our milling trains are as simple as they are effective. In accordance with the principle "milling, milling, finish grinding", the machine moves over the track sections requiring renovation at a maximum speed of 25 m/min. The milling process has a machining depth of up to 1.5 mm on the running surface and up to 5 mm on the running edge. This is followed immediately by finish grinding of the rail profile and inspection of the results by the integrated measuring technology.

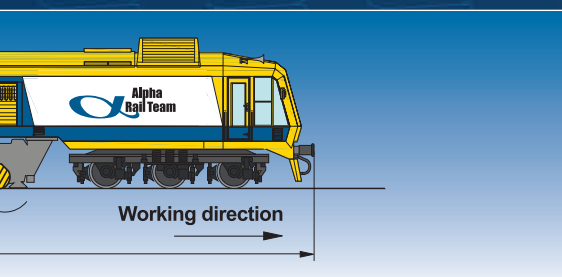
High precision and low costs



The result is an absolutely geometrically accurate restoration of the rail profile with:

- a transverse profile accuracy of +/- 0.3 mm
 - a longitudinal profile accuracy of 0.02 mm
- The quality of the surface roughness (Ra) is < approx. 10 µm.

Travel safety and comfort are restored and the service life of the rails is extended – at low overall costs!



Before



After

Clear benefits

- High working speed of up to 25 m/min
- Only one pass required
- Outstanding quality
- Integrated grinding technology for the finish grinding
- Absolutely geometrically accurate restoration of the rail profile
- Extension of the rail's service life by up to 300%
- Very environmentally friendly
- Reduction of travelling noise emission
- Tunnel work capability thanks to spark and dust extraction
- Autonomy > 8 hours

Benefit from our innovative technology and years of experience. Get your rails back into shape – for many years to come!



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