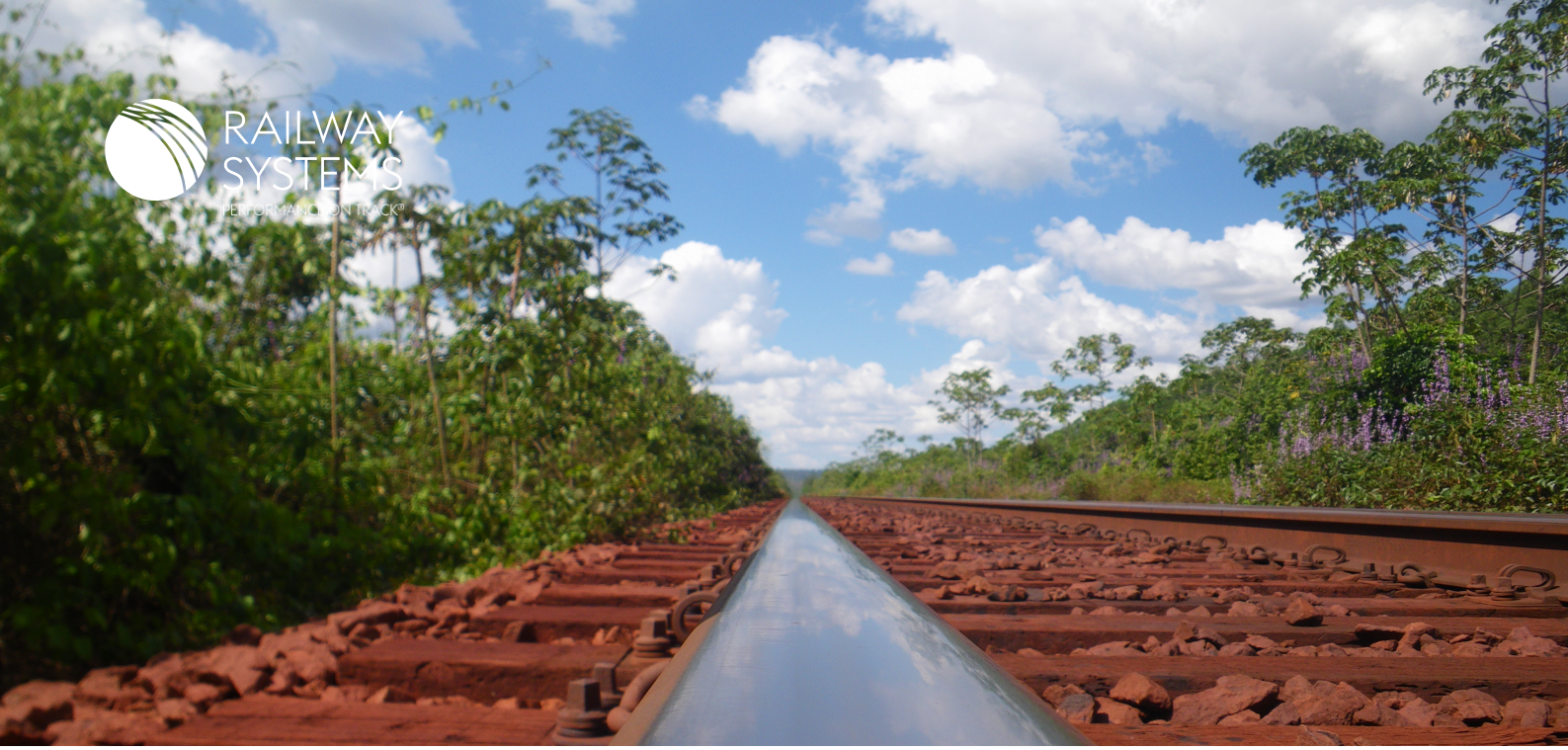


RAIL STEEL GRADE STRATEGY

Optimized system design as integrated part for operational efficiency

Description

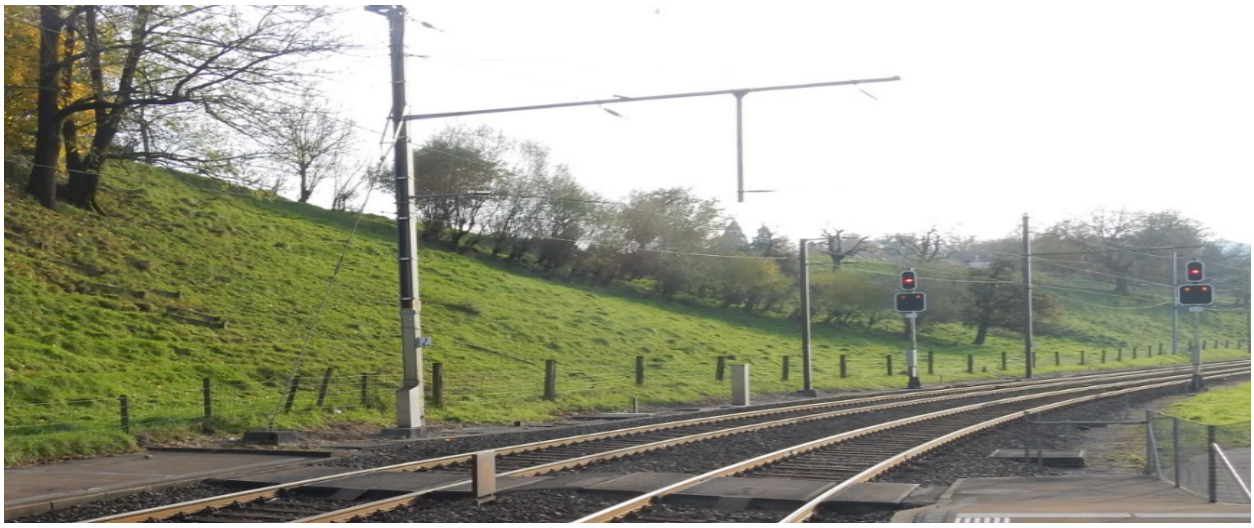
As every network has its own challenges, a customer-orientated, holistic rail and rail grade strategy allows focus on the special needs of an infrastructure operator to ensure proper rail performance and optimization of RAMS and LCC figures for every specific network. The detailed knowledge of the actual or foreseen situation in a network regarding stress levels and boundary conditions, as well as the actual rail conditions and their professional assessment provide the basis for the formulation of a holistic rail and rail grade strategy.

The best alignment of components and sub-systems of the highly complex railway system is a precondition for configuring a railway system that is holistically optimized. Knowledge and experience are key parameters for formulating an effective rail profile and steel grade strategy.

A good configuration of the railway system is the key parameter for sustainable infrastructure management.

Benefits to the Customer

» Optimum and fit-for-future combination of rail profile and steel grade – especially in challenging situations
» Optimized technical suitability (RAMS)
» Minimized total cost of ownership (LCC)
» Maintenance optimization at design level



OPTIMUM WHEEL RAIL INTERACTION

Service description
There are four steps for a holistic rail profile and steel grade strategy:

» **Assessment** of the current situation in existing systems in terms of sub- and superstructure conditions, stress levels, operational factors.

or

Assessment of the expected situation in the planned network in terms of targeted sub- and superstructure and vehicle design.

» **Selection** of the appropriate steel grade to combat rail deterioration mechanisms to ensure long service lives and little maintenance needs based on scientific knwowledge. Strong focus is laid on easy and customer-friendly implied processes and good weldability.

» **Selection** of the appropriate rail profile to meet the requirements regarding section properties and load-bearing capacity, based on wheel-rail contact analyses also adressing the most suitable wheel profiles.

» **Compilation** of information on the required rail maintenance to ensure both highest safety and long service lives including applicable methods, measures and intervals.

This service has especially been developed in order to popularize more than 100 years of experience in the wheel/rail interaction and consequential effects of train operation to our valued customers.