



RAILWAY
SYSTEMS
PERFORMANCE ON TRACK®

TRACK GUIDANCE ANALYSIS

Wheel-rail contact analysis and advising

Description

Due to the large variety of vehicles and wheel types and extremely different local conditions, railway infrastructure installations are a particularly demanding challenge. Especially concerning turnouts and crossings, particular constructional characteristics need to be paid attention to.

Furthermore, infrastructure operators must implement safety-relevant operational regulations at all times, while at the same time being under considerable cost pressure. This makes it necessary to evaluate a track system from an economic viewpoint as well.

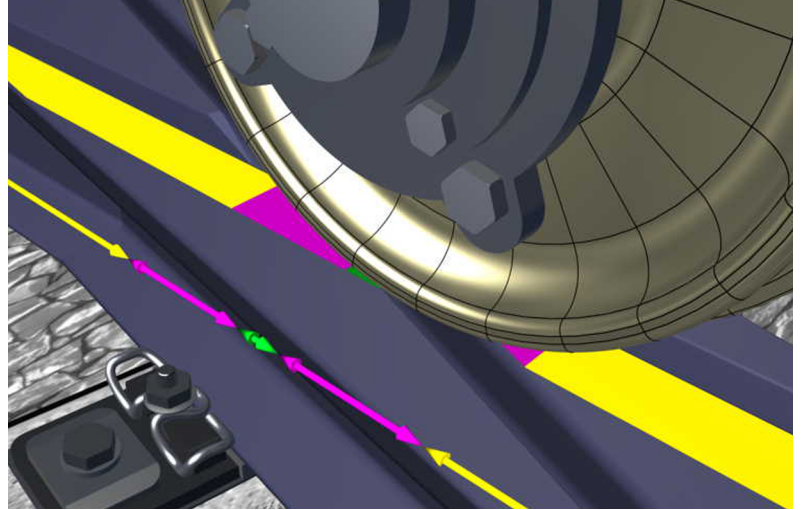
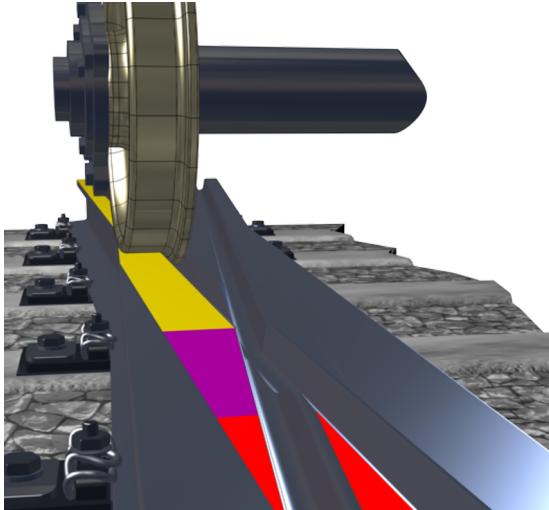
voestalpine offers track guidance analysis based on which, the construction and the installation of rail and turnout systems can be carried out in an optimum way.

Benefits to the Customer

- » Complex evaluation of vehicles and tracks
- » Wear analysis of existing wheel-rail profile matching
- » Determining the appropriate lateral dimensions of the system for new installations and maintenance
- » Optimized wheel profile
- » Proof of operational safety
- » Improved running smoothness of the vehicles
- » Reduced wear of wheel and rail
- » Reduced maintenance of track superstructure
- » High availability of the system guaranteed
- » Increased cost effectiveness

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ONE STEP AHEAD.



SERVICE DESCRIPTION

Table of lateral dimensions for safety, wear- and cost reduction

The track guidance analysis considers the individual vehicles and types of undercarriages (in particular, the wheels in a new and worn condition) and the infrastructure as a system.

A table of lateral dimensions is used to specify the necessary parameters of new tracks and turnout systems (condition at the time of purchase), as well as while in operation (calculation of the operational limit dimensions). This is a simple and convenient instrument for the person in charge of maintenance, and for the planner during the procurement procedure.

Practice-oriented optimization of the wheel profile

In order to reduce wear, an optimization of the wheel profile might be recommendable (e.g. selective changes in the width of the wheel, of the inclination of the front face of the flange, of the condition of flange throats and wheel running surfaces).

Individual wheel-rail profile matching

The individual wheel-rail profile matching, tailored to the requirements of the operators, is an essential prerequisite when it comes to safeguarding against derailment, and also for minimizing wear.

Integrated process evaluation

In the course of their service life, track systems and their components are subject to very individual requirements. To meet those requirements and to design an economically optimized system in terms of cost effectiveness, an integrated process evaluation is necessary and makes sense.

When the correct lateral dimensions are consistently observed, safety and smooth running can be enhanced, and wear and maintenance costs reduced.



Track Guidance Analysis

Required:
for any kind of operator

Reason:
specific characteristics of network and vehicles

Target:
optimum adjustment of wheel and rail

+ Availability

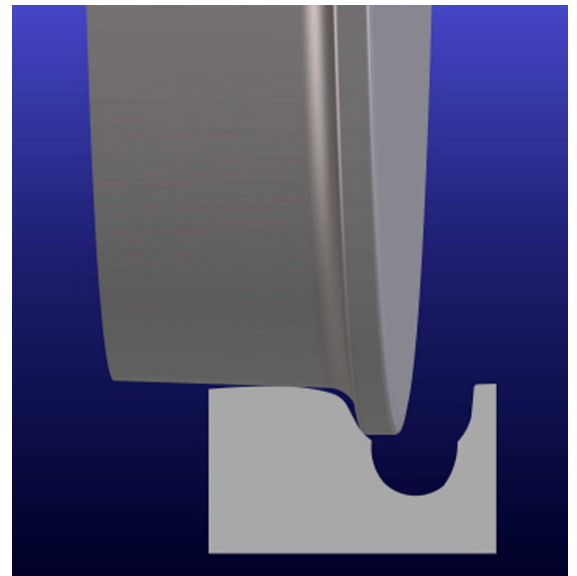
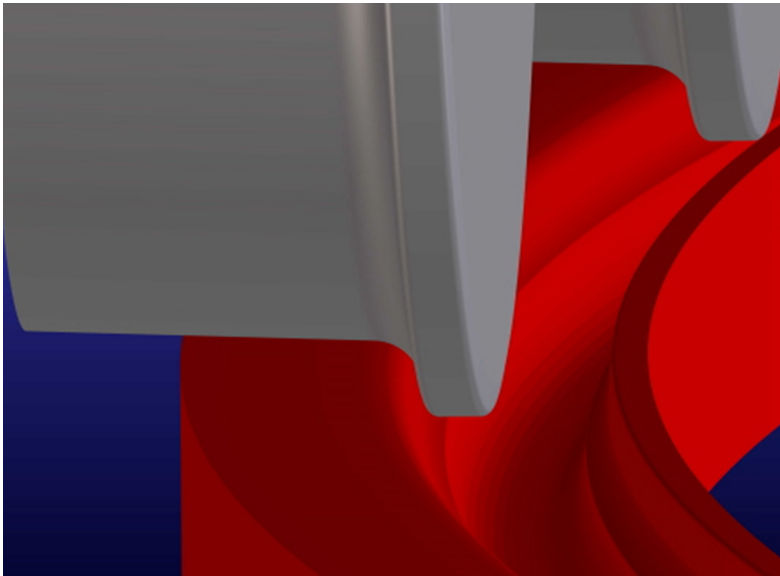
+ Running smoothness

→ Wear

→ Maintenance costs

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ONE STEP AHEAD.



CONTENT OF A TRACK GUIDANCE ANALYSIS

