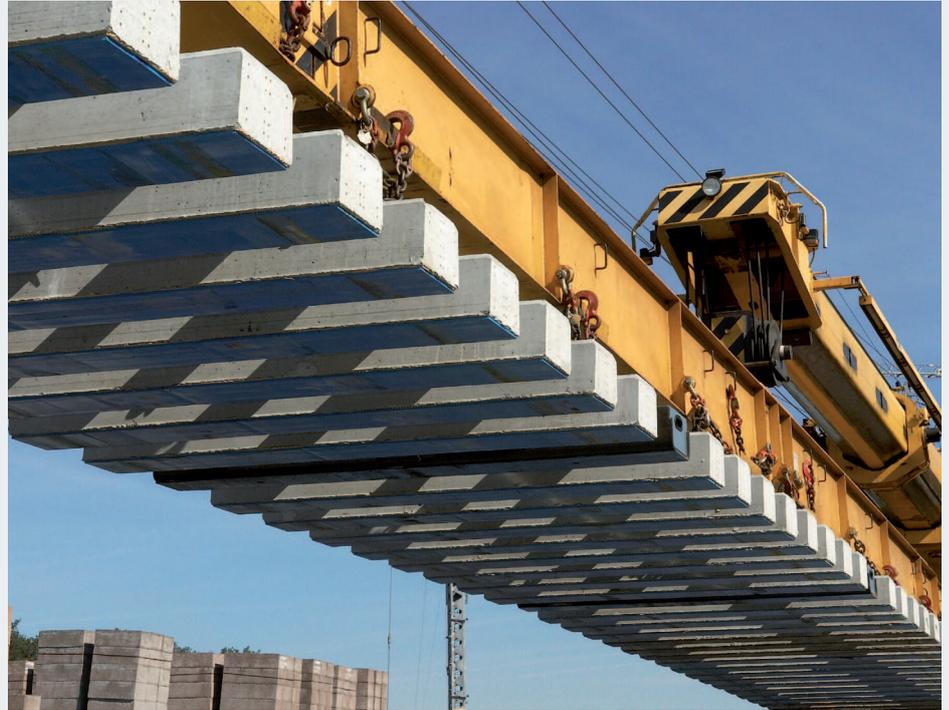


Elastic Bedded Turnouts on **Ballasted Track** using Sylomer® and Sylodyn® **Sleeper Pads**

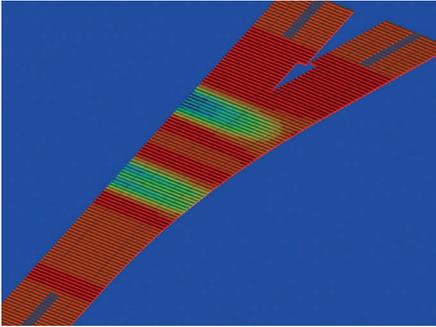
Advantages:

- Smoother passage
- Increased safety and comfort
- Reduction of wear and tear on the ballast
- Reduction of vibrations
- Reduction of Life Cycle Costs (LCC)



The stiffness of the bedding varies in turnouts on ballasted track due to the various lengths of the sleepers and components which increase track stiffness such as the crossing frog, check rails and wing rails. The resulting dynamic loads caused by passing trains increase the LCC, and reduce the level of comfort, and moreover the vibrations caused can be transmitted into neighbouring structures.

As a provider of comprehensive elastic bearing solutions, Getzner is tackling these challenges.



In addition to the delivery of sleeper pads, Getzner also provides its customers with engineering services regarding the elasticity for different kinds of turnouts. Using a Getzner computer model based on the Finite Elements Method, it is possible to model the overall behaviour of the system during the passage of a train, even for complex structures such as turnouts.

We will be more than happy to assist you personally with any questions you may have.

Problem	Getzner solution
Varying lengths of the sleepers result in differences in the contact area between the bottom of the sleeper and the underlying ballast. This results in differences in the stiffness of the bedding.	The distribution of loads in the superstructure is smoothed out using Sylomer® and Sylodyn® of varying stiffness. This allows for an almost completely homogeneous contact area between the sleeper and the ballast.
Differences in the stiffness of the bedding cause varying degrees of track subsidence. This increases the dynamic loads on the turnout construction and the ballast.	Homogeneous bearing of all sleepers minimizes the differences in subsidence and results in a „smoother“ turnout. As a result, the load distribution is more even, reducing the stress on the ballast and on sensitive components in the points.
The additional dynamic loads and the changes in the vibration patterns destroy the ballast and equipment more quickly, compromising comfort and safety, and pushing LCC higher.	The use of Sylomer® und Sylodyn® sleeper pads helps to minimize the loads, which extends the necessary tamping and maintenance intervals. Comfort and safety are enhanced. LCC are minimized.
Vibrations resulting from the dynamic loads are transmitted to the surrounding structures.	In the boundary areas between the sleeper and the ballast, the Sylomer® and Sylodyn® pads reduce the transmission of vibrations to surrounding structures.