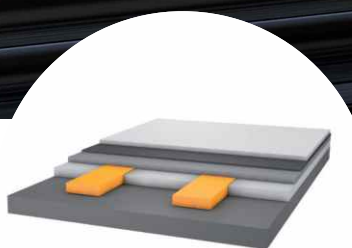


Case Study

Floor bearings for trains on the 'Tren Maya' line (MX)



- » Efficient vibration reduction with Sylomer® FR
- » Significantly increased travelling comfort
- » Simple installation and reduced life cycle costs



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Gentle vibration protection for more comfort

The project

The 'Tren Maya' railway line is located in Mexico and covers a length of over 1,500 kilometres. It connects various important tourist sites of Mayan culture as well as cities and beaches. From mid-2024, the trains on this railway line will transport goods and around three million people a year to 20 destinations in an environment-friendly manner.

Alstom Transport is building the 42 'X'Trapolis' passenger trains required for this on site in Hidalgo. Up to 300 passengers per train will be transported at speeds of up to 160 km/h on the route. In addition to passenger wagons, the trains also have sleeping and dining wagons.

In order to offer passengers a high level of travelling comfort, Alstom Transport was looking for a floating wagon floor bearing solution. The aim was to reliably reduce vibrations and noise levels. In addition, the client placed high demands on fire protection and required the trains to be delivered within a stringent time frame.

The Getzner solution

Sustainably protected

Getzner has already equipped the corresponding railway line in Mexico with under ballast mats and under sleeper pads to provide lasting protection for local residents, the nature reserve and the railway superstructure against vibrations and noise from the trains in operation. "We are delighted that Alstom has also opted for our vibration mitigation solutions to protect the interior of its railway wagons," says Gert Rhomberg, responsible product manager at Getzner.

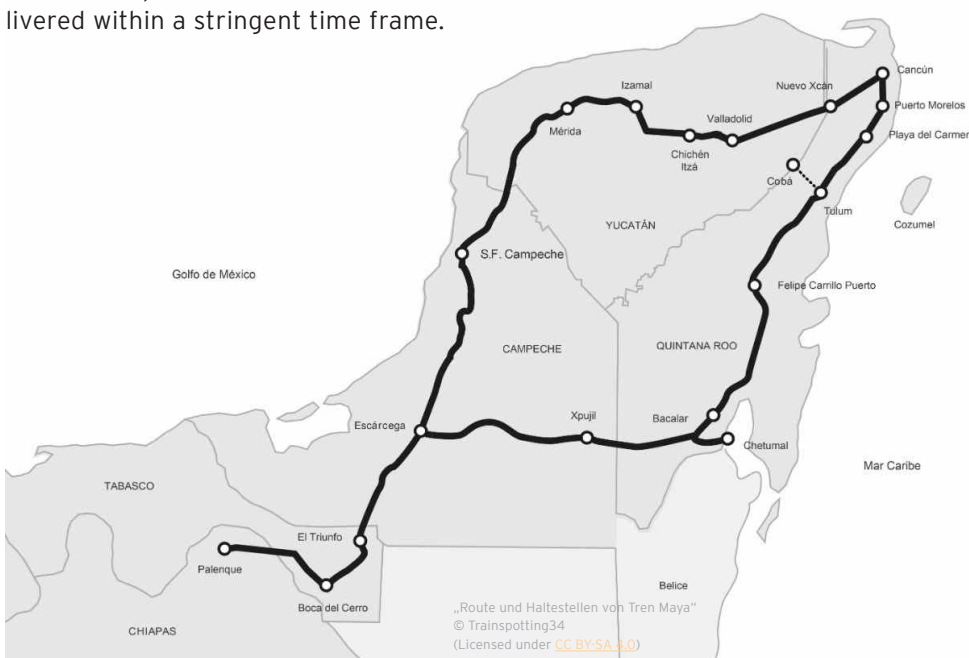
Less is more

Based on the requirements set, the experts at Getzner selected the ideal material to reliably decouple the floor board of the wagons from the structure. The design was optimised to achieve maximum vibration protection while keeping

costs, weight and construction height as low as possible. The solution: Sylomer® FR. "From experience, we know that the noise level inside the wagons is reduced by up to 7 dBA and vibrations by more than 20 dB," states Gert Rhomberg. In addition, the material fulfils the high fire protection requirements with Hazard Level (HL) 3 conformity in accordance with DIN EN 45545-2.

Quickly delivered, quickly installed

Within just a few weeks, Getzner delivered the first batch of elastomer stripes, which offer a great performance. The fitters from Alstom in Mexico were also impressed by the ease of installation: "The installation of the Getzner solution is easy, which saves Alstom a lot of time in assembling. 219 wagons will be produced until 2026. Thus, time saving is important," recalls



The Tren Maya line runs from the city of Palenque in the state of Chiapas in south-eastern Mexico to the tourist resort of Cancún in Quintana Roo via two different routes. The total length is 1,500 kilometres.

Gert Rhomberg. The materials of the Getzner solution compensate for tolerances in the unfinished floor in both length and width during installation - without any negative impact on the vibration-insulating properties.

Wagon costs reduced in the long term

With the customised design of the Sylomer® FR elastomers, Getzner has helped to cut both manufacturing and life cycle costs of the wagons. The reduced vibrations in the interior are not only much more pleasant for travellers and train staff. They also protect joints, electronic components and sanitary facilities. And thanks to the consistent material properties of the Getzner solution over its entire service life, Alstom Transport can be sure that this will remain the case for a long time to come.



Increased passenger comfort: Until 2026, Getzner delivers the elastic floor bearings for 219 wagons of 42 Alstom trains.



The lightweight and space-saving solution provides highest comfort to the passengers and protects electronic components in the long term.

Benefits



High comfort
thanks to
reduced noise levels
in the wagon



**Lower life
cycle costs**
due to low
wear and tear



Fast assembly
with tolerance
compensation
during installation



More space
due to low
installation
height



Maximum safety
thanks to
'EN 45545-2'
certification



Facts

Project:	'X'Trapolis' trains on the 'Tren Maya' line
Location:	Mexico
Client:	Alstom Transport India Ltd.
Solution:	Design and supply of approximately 8,000 elastic Sylomer® FR stripes (as per fire protection standard DIN EN 45545-2 for railway vehicles)
Implementation:	2023

About Getzner

We are proud to be the leading global expert in vibration isolation and protection for the railway, construction and industry sectors. Our innovative products are based on our proprietary materials, such as Sylomer®, Sylodyn® and Sylodamp®, and are complemented by spring elements like Isotop. Our applications effectively reduce vibrations and noise. They also reduce wear, extend the service life of the bedded components and help to improve usability, quality and comfort. We specialise in offering integrated solutions and targeted services for sustainable vibration isolation, based on intensive research, climate-friendly production and decades of experience.

We look forward to hearing from you.

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An integrated solution

Tren Maya is an exciting project in various dimensions: The line will be highly frequented and used for both passenger and freight transport. It runs through a nature conservation area that must be specially protected from vibrations and noise. Also, the connections should be as comfortable as they are reliable, so that road and air traffic will noticeably shift to rail.

A perfect playground for Getzner to utilise all its strengths in materials and applications:

- Comfort for passengers in the trains
- Superstructure protection for the track
- Higher track stability and safety
- Protection of the environment