

Elastic Transport Protection for Steel Coils on Freight Cars



Elastic, Hard-wearing Transport Protection

Challenge

Costs incurred due to transport damage

During transport from the rolling mill to the pressing plant, a steel coil often faces a distance of several hundred kilometres. These sensitive goods have to withstand this journey without incurring any damage. In the case of sheets with a thickness of only up to 0.3 mm, this is a real challenge. The automotive industry is the primary end customer of thin sheets from cold rolling mills.

The topmost sheets of metal are not only affected by shocks and impacts during the journey, but also during loading and unloading of the freight car, sometimes rendering the steel coils unsuitable for post-processing.

This means a higher level of administrative effort is required and process costs are increased, which must be partially borne by the carrier.

Conventional protective measures wear faster

Due to the high transport weight of the coils and the long journeys involved, conventional bases wear very quickly. Ultimately, the goods being transported are rolls weighing between 5 and 45 metric tons and with a diameter of 1.0 to 2.7 metres. Rubber products are not capable of providing sufficient protection for these requirements over the long term, meaning that they have to be constantly replaced.

Solution

Wear-resistant PU mats

An effective and cost-efficient solution is bedding the steel coils on wear-resistant polyurethane mats from Getzner. The elastic, robust materials feature unique material properties that have been used for decades in rail superstructures and in floating floors for rolling stock.

Thanks to their combined spring/damper properties, the PU mats made from Sylomer® offer optimum protection against shocks and impacts. They are resistant to oil and hydrolysis and display consistent elastic properties over long periods of use. An additional three millimetre thick compact PUR layer that protects against wear significantly increases the durability of the transport protection solution, yet without affecting the elastic properties.



» Protective measures using rubber products are not enough, as these products quickly become worn. «



Lower noise levels thanks to elastic bearing



Elastic freight car liner featuring Sylomer®



Services that are made to measure

A perfect holistic solution is created when the client and Getzner tackle a challenge together. Customers benefit from a comprehensive range of services as well as tried-and-tested material quality that has been proven time and again. Getzner manufactures the elastic bearing to order and provides installation instructions to ensure that the transport protection can be installed quickly and easily.

» The high demands for persistence and durability favour the use of the polyurethane material Sylomer®. «

Benefits of the elastic transport protection solution

- Prevents damage during transport and costly material waste
- High protection against wear thanks to Sylomer® mats in contrast to conventional solutions with rubber products
- Bearings are individually calculated and flexibly produced
- Reduced noise levels due to elastic bearing

Unique material properties

- Compact surface effectively protects against wear
- Consistent elastic properties over a long lifetime
- Spring/damper combination for optimum transport protection
- Resistant to oil and hydrolysis



Range of services

For decades, the materials from Getzner have been used in railway superstructures and as floating floors for rolling stock to reduce structure-borne noise. The durability and effectiveness have been verified by numerous external testing institutes.

- Individual calculation of each bearing - for the highest levels of effectiveness
- Individual manufacturing of mats in the thickness and shape required
- Support during development and construction - to achieve the most efficient and cost-effective solution
- Decades of experience in material design
- Development of all materials in our in-house laboratory

Reference

200 freight cars with elastic trough lining by Getzner Werkstoffe GmbH

Operator: Rail Cargo Austria
Freight car manufacturer: Tatravagonka Poprad a.s.

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