DECIDAMP SP500 THE SOLUTION TO STADLER'S TRAM WEIGHT CONSTRAINTS

CASE STUDY

BACKGROUND

Stadler Rail AG, is a Swiss manufacturer of railway rolling stock, with an emphasis on regional train multiple units and trams. Stadler has been building trains for 75 years for customers who count on reliability, precision and first-class service. "Every step of the way, we do our best to make sure that wherever they are in the world, passengers get to their destination safely, quickly and in comfort".

One recent success for Stadler was being awarded the tender to supply 30 Tango LRV to the third largest city in Czech Republic, Ostrava. Tango LRV are highly adaptable which makes them ideal across a variety of environments however it also meant many options and obstacles that needed to be considered by both Pyrotek's and Stadler's design engineers, to make the project come together. Working with Stadler's design team in Prague, the design presented a challenge to both companies.

The low floor design of Tango trams meant it had to withstand high impact and seal penetrations of the floor from its the surrounding elements. The original design was to use metal sheeting and mastic sealants, both these items added cost and increased the design weight of the train.

Stadler needed to meet the strict weight requirements for the metro-bound carriages while still providing long-term protection to the exterior of the carriage, and reducing noise and vibration transmission to provide a quieter ride.

THE SOLUTIONS

The project required an underbody coating with high durability, weather, stone and chip resistance, one which meets the latest fire code and had low environmental impact. Developed especially for transport and industrial applications, Decidamp SP500 effortlessly met Stadler's weight restrictions whilst providing exceptional vibration damping.

Over 10 months of rigorous testing and trialling of Decidamp SP500, the design team of Stadler were happy to re-design the flooring system to remove the original heavyweight solution and opt for a more efficient, easier and cost-effective solution by using Decidamp SP500.

One critical factor in Stadler's decision to specify Decidamp SP500 for their project was the relationship and trust built through the comprehensive consultation offered by Pyrotek's team of research and development experts, who ensured every outcome was met. This included problem solving initiatives on the custom trams, technical data, projections and investigations into water resistance.

Stadler produced the Tango LRV for the city of Ostrava, Czech Republic

RESULTS

The Tango project is expected to be completed in 2019, with a further contract between Ostrava and Stadler for more tram fleets to be produced. The strong, successful collaboration between Stadler and Pyrotek will continue with Decidamp SP500 specified for underbody protection in Stadler's next fleet rollout.

Stadler staff were supported in training on application techniques as well as ongoing technical and personnel support by Pyrotek's team to ensure a smooth finish to the project.

This water-based, viscoelastic vibration damping compound is incredibly lightweight, UV, water and chip resistant.

The unique, lower floor design of the LRv tram assists passengers board the tram easily. The project needed to meet strict weight requirements while providing long term protection.