



HYPERLOOP
TRANSPORTATION TECHNOLOGIES

The Hyperloop project: helping to design the transport of the future

Spanish company Tecnoaranda has asked Hempel to paint its new range of Hyperloop prototypes in Europe.

Hyperloop is undoubtedly one of the most innovative transport initiatives in the world right now. This revolutionary high-speed project developed by SpaceX and Virgin sends capsules – or carriages – through a network of empty steel tubes floating on a layer of air, and it has been designed to exceed speeds of 1,000 km/h. The idea was first formulated in 2013, with the first range of prototypes being constructed in Nevada in 2016. Hyperloop recently broke the record for this type of capsule transport, reaching a speed of 355 km/h in the company's own tunnel in Hawthorne, California.

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The company has started building its first test track in Europe, locating it in Toulouse. This project takes place over two phases. The first involves a (now completed) sealed 320 m system, while the second comes into operation in 2019 to form a 1 km-long corridor. Tecnoaranda is responsible for making the tube through which the capsule will travel. This Spanish business is new but it has a wealth of experience in the steel industry, as well as a leading Spanish service centre for steel plates, wind turbines, tubular products and logistics. The project entails manufacturing twenty-five 20 m sections of tube, each with an inner diameter of 4 m. They are made of S 355 J2 quality, 25 mm-thick steel plate and have flanges at the end to make it easier to link them together.

The inner and outer sides of structures of this kind need to be treated to ensure maximal results for the innovative technology they are serving. As a result, Tecnoaranda has turned once again to Hempel and its extensive experience. The company has specially designed two systems for this particular setting. The three-coat system that was eventually selected for the outer sections uses an initial layer of Hempadur Avantguard 750 1736G, followed by a layer of Hempadur 4774D, and finished off with a topcoat of Hempthane HS 5561B that provides excellent colour retention and gloss. As for the inner surfaces, they are



painted with a coat of Hempel Galvosil 15700, an inorganic zinc silicate made up of two components which offers outstanding resistance against damage of all varieties.

Hempel is delighted to contribute to the Hyperloop project and help our clients, once again, to overcome their most complex challenges - even when these involve dreaming up the transport of the future.

Hempel UK Ltd

Berwyn House. The Pavilions, Llantarnam Park, Cwmbran,
South Wales NP44 3FD Tel: +44 01633 874024
E-mail: sales.uk@hempel.com www.hempel.co.uk **hempel.com**