Applied Research Topics in **Transport and Logistics**

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ISSUE TOPIC • Prevention of Traffic Accidents at Level Crossings

INDUSTRY EXPERIENCES

BODAN®: Level Crossing Solution with Unique Characteristics

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We talked about BODAN level crossing solutions with Zdravko Zdunić, Executive director of RMT GRUPA and Roman Wiesinger, international sales manager for BODAN systems in Gmundner Fertigteile.

What is BODAN system?

BODAN level crossing solutions are innovative, sustainable and efficient solutions that increase safety at level crossings. They are characterized by a rough and anti-slip surface, material resistant to salt,

water, oils, acids, alkalis, weather conditions; the life time of the panels is higher than 25 years, low maintenance costs and enable interoperable use, regardless of the type of track and sleepers.

What material is BODAN made of

It is made of polymer compound which is more solid than standard concrete with even higher flexibility and tensile strength.

What design methods is BODAN utilizing?

The so-called BRIDGE DESIGN which means that the panels are held by rubber profiles in the rail web & the edge beam only and do NOT touch the sleeper. Due to this design method BODAN can be used at any type of sleeper, any type of rail profile and any type of fastening system.

What happens to the weight of crossing vehicles?

The weight / load of any vehicle is distributed from the panels to the rail into the dedicated zones (under the rail) of the sleeper. The sleeper centre is never loaded, so no weight is forcing the sleeper to be damaged.

Why is independency of the rail/sleeper/fasting important?

The BODAN system is designed in a way that it can be used at every destination. Each panel has identical dimensions and is installed at any type of rail, any material and type of sleeper and any sort of sleeper fastening the same way. Even when a lc is being relocated or rail profiles are changed, the same panels can still be used!

What is the life time and life cycle costs of BODAN?

Due to the material characteristics of Polymer compound, the life time of the panels is higher than 25 years. Depending on the amount and load of traffic, only the rubber profiles need to changed (recommended when track maintenance is being carried out) ... the panels are used furthermore. Due to this unique low amount of maintenance the life cycle costs (LCC) in a period of 15-20 years are much lower than solutions of competitors.

How can I add markings or different colours to the BODAN system?

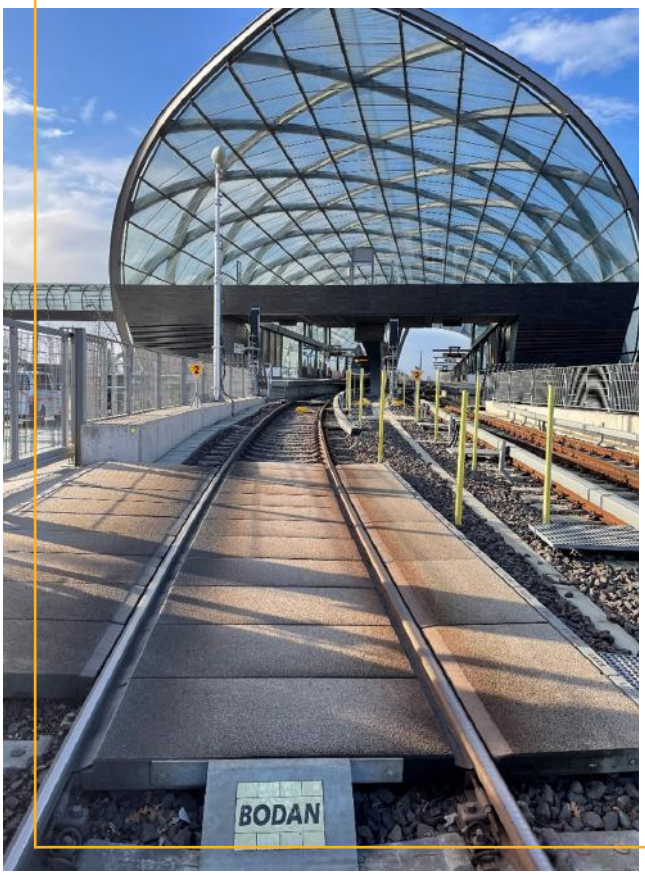
On one hand side the panels can be built pre-coloured in the production facilities or markings can be added on site by using standard road paint.

What kind of weight can BODAN be loaded with?

Each panel can be loaded with wheel, loads of up to 15 tons (which is more than allowed on official roads).

Can I cover also two tracks and the section in between?

Yes, single and even multi track pavement is applicable with the BODAN solution. Also in turnout sections the same panel design method is applied in order to have the same quality at any zone. ●



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