The design of rail-tracks embedded on segmented supports with continuous concrete foundation establishes exceptional physical characteristics of the embedding element's material, required for optimal taking over of the wheel's and rail's impact energy and its deposit in the embedding elements in the form of energetic capacity. The applied designers technics ensure systems life span of minimum 20 years for embeddings on straight trackroad sections. Such design of rail track embeddings is applicable for the construction of new or a reconstruction of the existing trackroad. When reconstruction of the existing trackroad takes a place, the systems allow a reduced speed of the carriage in traffic.
AMENDED CLAIMS

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1. The application system of the rail embedding system on segmented supports with a continuous concrete foundation is characterized in that the embedding members are allocated between the rail and the concrete foundation in constructive sequence: elastomer pad, workshop-made plate from non-metal composite and on-site cast plate from non-metal composite in course from rail toward continuous concrete foundation, designed as shown in Figure 2 and Figure 5, where the embeddings are spaced not more than 600 mm for railways and not more than 1000 mm for tramways and light railways.

2. The application system of the rail embedding system on segmented supports with a continuous concrete foundation according to claim 1 is characterized in that the direct contact between the rail (or a profiled steel plate as an extension of the rail, Fig.2-2) and the segmented embedding takes place through an multi-layered elastomer pad as an embedding member (Fig.2-9, Fig.5-5). The elastomer should be designed that the with compression module is not less than 30 N/mm², the density of the elastomer material is not less than 1300 kg/m³ and the spring mode built-in mode (Fig.1) is obtained.

3. The application system of the rail embedding system on segmented supports with a continuous concrete foundation according to claim 1 2. is characterized in that a workshop-made plate from non-metal composite with the compression module not less than 130 N/mm² and the density of the elastomer material not less than 1900 kg/m³. (Figs. 2-10, Figs.5-6) as an embedding member is placed underneath the multi-layered elastomer, referred to in claim 2. The plate should be designed to obtain that the compression module is not less than 130 N/mm² and the density of the elastomer material is not less than 1900 kg/m³.

4. The application system of the rail embedding system on segmented supports with a continuous concrete foundation according to claim 1 3. is characterized in that the plate from non-metal composite (Fig.2-11, Fig.5-7) with compression module after the hardening of the poured compound not less than 100 N/mm² and the density of its material not less than 1800 kg/m³ is cast on site of embedding underneath the shopwork-made plate and over continuous concrete foundation with concrete grade which compression module is not less than 1100 N/mm². The on-site cast plate as an embedding member should be designed to
obtain that the compression module after the hardening of the poured compound is not less than 100 N/mm\(^2\) and the density of its material not less than 1800 kg/m\(^3\).

5. The application system of the rail embedding system on segmented supports with a continuous concrete foundation according to claim 1 is characterized in that at the place where the embedding is made anchor bolts are coaxially inserted into the bores in the continuous concrete foundation, with liquid polymer poured around them. The polymer should be designed to obtain the elasticity module not less than 4000 N/mm\(^2\) after its hardening and the dielectric constant not less than 5.

6. The application system of the rail embedding system on segmented supports with a continuous concrete foundation according to claim 1 is characterized in that the embeddings are spaced not more than 600 mm for railway traffic and not more than 1000 mm for tramway and light railway traffic, the non-metal cast plate referred to in claim 4 is poured at the embedding’s place onto a continuous concrete foundation. It is necessary to apply a concrete grade for the foundation with which a compression module not less than 1100 N/mm\(^2\) will be achieved.