

Title (en)
BALLASTLESS SUPERSTRUCTURE WITH CONCRETE SLEEPERS

Title (de)
SCHOTTERLOSER OBERBAU MIT BETONSCHWELLEN

Title (fr)
SUPERSTRUCTURE SANS BALLAST A TRAVERSES EN BETON

Publication
EP 0724667 A1 19960807 (DE)

Application
EP 94930934 A 19941018

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Abstract (en)
[origin: WO9511345A1] A ballastless superstructure for railways and a process for producing such a superstructure are disclosed. Concrete sleepers (1, 16, 56) provided with vertical adjustment through holes (5, 18, 47, 58) are laid on a concrete supporting slab (12, 22, 42, 52), above an intermediate layer of levelling concrete (10, 21). Plugs (14, 23) set into the concrete supporting slab act as stops for at least partially threaded bolts (9, 19, 49, 59) that extend through the concrete sleepers. The concrete sleepers are at least temporarily supported upon the concrete bearing slab by said threaded bolts. The threaded bolts further have a stop in the concrete sleepers themselves. After the sleepers are accurately positioned, the gap between the sleepers (1, 16, 56) and the concrete supporting slab (12, 22, 42, 52) is filled with a mortar, preferably an expansive mortar (10, 21), so that the concrete supporting plate, the intermediate mortar and the concrete sleepers form an inelastic base for the rails to be elastically laid on the surface of the concrete sleepers. In one variant, the concrete supporting slab consists of finite plates arranged in a row. The supporting slab itself has a roof-shaped bottom surface and lies on a saddle-shaped or roof-shaped hydraulically bound support layer (41, 55) so that the supporting slab is centred in the middle of the track. In order to dispense with noise protection systems for the ballastless superstructure, the superstructure may be provided with noise dampening elements (Z1, Z2) that are easy to lay and to remove.

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