

Cross-Section Repair of Track Slab for Tunnel Section Using Polymer Cement Mortar

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Direct seat fastening systems are used for slab tracks laid in straight sections in tunnels. A shoulder of a track slab supports the curved part of a plate-spring used in the fastening system. However, it is reported that shoulders of some track slabs are damaged due to ASR or rebar corrosion. To repair the damages, resin mortars with high material costs are generally used for cross-section repair of track slabs. Therefore, from the viewpoint of cost, we investigated the application of Polymer Cement Mortar (PCM) with lower material costs than Resin Mortar, to the cross-section repair of track slabs in tunnel sections. As the results of various tests, we confirmed that the shoulder repaired with PCM has sufficient shear capacity and trains can be passed after 2 hours of material age.