



Use of ACETex® in Treatment of Railway Subgrade

Location: New Taipei City, Taiwan

Application: Separation and Reinforcement

Problem :

The project located in Raifung, one of the safety improvement planes of Taiwan Railways Administration (TRA). It had to solve the problem of fines pumped upward into the ballast layer because the vibrational load of trains transferred to the excess pore water pressure. The phenomenon of fines pumping has distorted the rail owing to the differential settlement, and seriously endangered the safe running of railway accordingly. TRA was looked for a durable solution with the safety and cost efficiency that is not only replacing the ballast but also playing the effect of geosynthetics.



Solution :

Removed the polluted ballast in the initial stage and graded the level of subgrade, lied a layer of permeable ACETex® PP woven geotextile as a separator to obstruct the upward movement of subgrade fines. As function of ACETex®, high tension strength of geotextile improves the bearing capacity of subgrade and diminishes the differential settlement. For the purpose of longer service life, a non woven geotextile that manufactured by continuous filaments covered on ACETex® mainly protecting ACETex® without the abrasion of ballast. Backfill the clean ballast to the original railway elevation once completed the aforementioned works. The geosynthetics are performing well without fins pumping at present and therefore TRA is considering to utilize this integrate solution in Taiwan.