

Compatibility of Cement and Emulsified Asphalt in CA Mortar

F. Wang, T. Wang, Z. Liu, Y. Zhou, S. Hu
Wuhan University of Technology, Wuhan, China

Ballastless slab track is an advanced track structure with wide adoption in high speed railway, underground system and, which finds abroad applications in some developed countries such as Japan, Germany. CA mortar is the key component in ballastless slab track and serves as the elastic shock-absorber. Compatibility of the main constituents of CA mortar, namely cement and emulsified asphalt poses great significance, influencing the physical and mechanical properties, and the durability of CA mortar. This paper recommended a recipe of CA mortar(Unit: kg/m³): Ordinary Portland Cement : Cationic Emulsified Asphalt : Fine aggregate : Water : organic agent : antifoaming agent : air-entraining agent = 300 : 480 : 600 : 70 : 25 : 0.16 : 0.04, which effectively met the requirement for qualified compatibility of CA mortar.