## Development of Damage Reduction Products of the Rail Height Adjustment Pad

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Rail height adjustment pad (RHAP) is one of the components of the rail fastening device "Type 8" on the slab track. It is made of thermosetting polymer resin, such as unsaturated polyester (UP) resin reinforced with glass fiber sheet. However, PHAP is sometimes subjected to shear damage by the slide of ends of continuous welded rail, due to expansion and contraction by rail temperature fluctuation. Therefore, the authors have developed two types of countermeasure products. One is made of conventional UP resin reinforced with liquid crystal polyester fiber sheet, and the other is cycloolefin resin. In this paper, the required performances of RHAP and the characterization of developed products were also described.