

Performance Evaluation of Aged Prestressed Concrete Sleepers in Areas under High Risk of Salt Damage

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There has been little systematic examination of material deterioration about PC sleepers. This research examines aged sleepers placed in a region under a high risk of salt damage. Various tests and numerical analysis on load capacity are conducted. The result clarifies that even sleepers laid near the coastline do not need to be replaced immediately because the load-bearing capacity of sleepers satisfies the JIS. However, since chloride ion concentration exceeds 1.2kg/m^3 , there is a risk of steel wire corrosion, and it is estimated that the replacement time of sleepers becomes than ones in general environments.