Influence of the Process of the Failure of Cut and Cover Tunnels on their Structural Strength

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In the case of the collapse of Daikai Station of the Kobe Rapid Transit Railway when the 1995 Kobe Earth-quake occurred, it was clear that a shear failure of the center pillars of a cut and cover tunnel was partly the cause of the collapse of the whole tunnel. However, it has not been clarified how severe damage to a side wall influences the degree of the collapse of the whole tunnel. In this research, we carried out static loading tests and analyses for cut and cover tunnels in order to clarify the influence of the process of failure on their structural strength.