

# 1. Study about Pre Cast Lining of a Tunnel

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The main purposes of the concrete tunnel lining are improvement of safety, interior finishing and prevention of water leakage rather than mechanical function of load-carrying capacity.

As for the concrete lining cast with large-sized sliding form that is currently used, there is the fear of depreciate of quality by a cold joint and a hair-crack occurring by limitation on a process of construction. In order to improve these problems, we propose a pre cast lining method. As for the pre cast concrete, it is high quality, but a cost is generally high. We carried out a case study of pre cast lining about its structure, a construction method and cost down procedure.

As future technology for current standard lining, we suggested a thin pre cast lining method of construction for a 2 traffic lanes road tunnel.

**Key words:** rock tunnel, pre cast lining, high quality