

ISSUE: 07. ROAD TUNNELS IN WINTER CONDITIONS

SUB-ISSUE: Road tunnels in winter conditions

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Room:

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Presentation title:

INVESTIGATION OF EVALUATION AND ESTIMATION OF TUNNEL LINING DETERIORATION BASED ON INSPECTION DATA

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Summary:

Infrastructure maintenance is becoming increasingly important in Japan. Especially in Hokkaido, about 40% conventional construction method road tunnels have been constructed over the past 40 to 50 years. Therefore, many conventional construction method road tunnels will become to its rehabilitation stage, and almost tunnel linings must be maintenance or repair. This paper proposes deterioration methods based upon inspection data in order to carry out strategic maintenance and to rationalize life cycle cost analysis for tunnel structures. The resistance of deteriorating tunnel structures is non-stationary stochastic processes, and reliability problems of such structures are essentially different of time-independent reliability problems.

