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## Study on Methods for Improving Performance of Concrete Member with Water Supply Curing System

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The title of this doctoral thesis is “Study on Methods for Improving Performance of Concrete Member with Water Supply Curing System”.

The purposes of this thesis are to develop the water supply curing method with Water Supply Curing System, and to develop the electrochemical repair method and electrochemical cesium removal method with Water Supply Curing System.

This thesis consists of following eight chapters.

In Chapter 1 “Introduction”, the background and purpose of this study and the structure of this thesis were shown.

In Chapter 2 “Previous study”, the knowledge concerning the influence of curing on concrete performance and the conventional construction method of electrochemical repair was investigated.

In Chapter 3 “Development of Water Supply Curing System”, Water Supply Curing System was designed and improved.

In Chapter 4 “Influence of wet curing condition during construction on concrete performance”, the influence of curing conditions on performance of new concrete was investigated by experiments using cylindrical, cuboid and mock-up wall specimens.

In Chapter 5 “Influence of the kind of curing water on concrete performance”, the influence of the kind of curing water on performance of new concrete was investigated by experiments using cylindrical, cuboid and mock-up wall specimens.

In Chapter 6 “Application of Water Supply Curing System to electrochemical repair”, the applicability of Water Supply Curing System to electrochemical repair was investigated by experiments using cuboid and mock-up specimens and construction for actual structure.

In Chapter 7 “Electrochemical cesium removal method from concrete member”, the electrochemical method of removing cesium from concrete member was investigated by experiments using cuboid and mock-up wall specimens.

In Chapter 8 “Conclusion”, the results of this study were summarized, and then the future prospects were shown.

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