Committee Report: JCI-TC164A
Technical Committee on concrete deterioration in natural environments

委員会報告：JCI-TC164A
自然環境下のコンクリート劣化研究委員会

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Abstract
This technical committee ascertained the state of concrete deterioration, organized and verified the latest environmental evaluation techniques related to the deterioration mechanism, and organized the latest testing methods. The targeted deterioration was rebar corrosion due to carbonation, salt damage, frost damage, and soil degradation, but the group also aggressively examined the state of frost damage in the Kyushu and Chugoku regions in particular, as well as discussing the external degrading forces and initiating new exposure.

1. Introduction
This technical committee, the “Technical committee of concrete deterioration in natural environments,” was the successor to the “Technical committee of concrete in natural environments” chaired by Dr. Eiji Kamada from 1991 to 1992 and the “Technical committee on concrete performance in natural environments” chaired by Dr. Noboru Saeki from 2003 to 2004, and its purpose was to modify/upgrade the concepts raised by the past two technical committees, as well as the techniques, results, know-how, and discussion they cultivated, for the present times, and leave the study of “concrete in natural environments” to its successors.
Based upon the 12-year cycle on which the previous 1991 and 2003 technical committees were set up, the environments and deterioration targeted by this technical committee were ① deterioration in ordinary environments (carbonation), ② deterioration in salt damage environments, ③ deterioration in frost damage environments, and ④ deterioration in corrosive volcanic gas and soil environments. However, the activities on this occasion were focused upon the study of “concrete frost damage in the Kyushu and Chugoku regions” as the key issue. The technical committee initiated a survey on the actual state of frost damage in the Kyushu and Chugoku region, studied the sizes of the external sources of deterioration, and.....

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