

# A STUDY ON RELATIONSHIP BETWEEN DETERIORATION OF STRUCTURAL FUNCTION AND REHABILITATION AND/OR REBUILDING DEMANDS OF INHABITANTS OF APARTMENT HOUSES

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## [SYNOPSIS]

In this study, rehabilitation and/or rebuilding of reinforced concrete apartment houses were focused on. An influence of structural deterioration on the idea of inhabitants about rebuilding was examined, and quantitative modeling of the "demands for rebuilding" in terms of "required residual life" of inhabitants was carried out.

In the Chap.1, research objectives as well as circumstances are mentioned. In the Chap.2, primary causes of structural deterioration and prediction of the deterioration are briefly summarized. Then, necessity of life-cycle concept is emphasized for the optimization in the planning of rehabilitation and/or rebuilding. In the Chap.3, the "necessity" and "demand" for rehabilitation and/or rebuilding of a building are defined. Then, evaluation method of "demand" in terms of required residual life is proposed, which is one of the primary subjects of this research. In the Chap.4, outline of the questionnaire research to inhabitants about rehabilitation and/or rebuilding and its results are shown. In the Chap.5, the results so obtained are examined. Especially, relationship between the structural deterioration and the demand for rebuilding is investigated. In the Chap.6, quantitative modeling of "demand" in terms of required residual life is proposed on the bases of the study through the multi-variable analysis carried on the questionnaire results. In the Chap.7, the direction to the optimum planning for rebuilding based on the structural deterioration is indicated. In the final Chap.8, concluding remarks obtained are listed. Future research needs are also mentioned.

Most of the material in this study is a part of the master thesis of Mr. Hiroshi Yoshizaki (Former Graduate student of Kobe University in 1999.)