

17. Experiment of Flat Plate Structure

- Part 3 Method of Designing Flat Plate Frame -

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Flat plate structures, which consist of columns and slabs that have no beam forms, are a method for building skeleton infill (SI) houses. Flat plate structures, which have no beams, enable spaces to be freely organized, but their behaviors during earthquakes are little understood. Based on the results of partial frame experiments conducted to understand the properties during earthquakes and determine the design conditions, methods for evaluating the hysteresis characteristics and ultimate strength design were developed to enable flat plate structures to be used as ordinary rigid frame structures. An overview of the frame construction method, the method for evaluating the hysteresis characteristics and the ultimate strength design method are described.

Key words : flat plate structure, reinforced concrete, slab