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COMPARATIVE STUDY OF PLANNING STRUCTURE BY USING C-PLUS PRECAST SYSTEM AND CONVENTIONAL CONCRETE SYSTEM

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Abstract

The construction system using precast is the main choice to produce fast construction work. The precast system technology can replace conventional/traditional concrete systems because it has many advantages possessed by precast systems.

There are various types of precast available for high rise building systems, this final project will discuss C-Plus precast systems. This precast system has been used in the construction of the Cigugur Apartment at Cimahi district, West Java as many as 2 blocks in 2006. The C-Plus precast system were developed by PUSLITBANGKIM (Center for Settlement Research and Development) is a structural system that focuses on the form of columns in the form of plus signs for room efficiency so that the walls are flat with columns.

This comparative study will compare the planning of 5-storey high-rise apartment buildings with C-Plus precast systems and conventional concrete systems. Structural planning is based on SNI 03-2847-2013, SNI 03-1726-2002, and PPPURG 1987 using SAP 2000 program.

The results obtained from this study are that the use of C-Plus precast systems requires lower concrete volumes but requires a higher number of reinforcing steel than conventional concrete systems.

Keywords: *structure, precast, c-plus precast, conventional system, SAP 2000*