DESIGN MODIFICATIONS USING PRECAST WITH SRPMM METHOD IN DORMITORY OF BP2IP SURABAYA BASED ON SNI 03-1726-2010

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ABSTRAK

Precast method (precast) is currently being rapidly adopted in the construction of civil construction. This is because the precast has several advantages over methods cast in place (in site). Those advantages include the production process does not depend on the weather, do not require extensive storage material, did not require a lot of formwork, processing time is relatively short, relatively low cost, more secure concrete quality control, health, safety, and environmental friendliness. BP2IP on the actual conditions are currently located in Surabaya has a height of four floors and was built using the cast in place (in site). This building will be built in Madura dimodifikasi and using precast method (precast) on beam elements, plate and stairs, while for the column element method cast in place (cast in site). At the foundation elements such as pile cap and tie-beams and concrete topping is planned to use a method in place of cast (cast in situ). The number of types of different structural elements kept to a minimum wherever possible. This is because the precast elements will be very economical when used in buildings that have a typical type.
The foundation of this building will be designed using the foundation piles. The building also will be designed using bearer Moment Frame System Medium (SRPMM) then all gravity and lateral loads will be accepted by the order. Loading of the gravity load calculations using RSNI 03-1727-1989. As for lateral loads such as wind loads and seismic loads using SNI 03-1726-2010. For the calculation of both reinforcement and shear reinforcement bending and torsion using the provisions of the precast elements SNI 03-2847-2002. Forces in the removal process that happens aibat precast elements are calculated using the provisions of the PCI design Handbook Fourth Edition. The final goal in the modification of the design of this building is the building must be able to accept the force of gravity and earthquake forces according to seismic zone of the building is located.

Keywords: Precast (precast), bearer Moment Frame System Medium (SRPMM).