

Analisis Desain Gedung Perkantoran 40 Lantai Menggunakan Dual System (SRPMK dan Shear Wall) Tanpa dan Dengan Post-Tension Flat Slab = Analysis Of 40-Storey Office Building Using Dual System (Special Moment Resisting System and Shear Wall) Without and With Post-Tension Flat Slab

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Abstrak

Post-tensioned (PT) flat slab merupakan salah satu sistem struktur yang banyak digunakan di beberapa negara seperti Amerika Serikat, Australia, Afrika Selatan, Thailand, dan India. Dibanding negara lain, penggunaan PT flat slab di Indonesia masih tergolong sedikit, umumnya hanya pada basement. Hal ini dapat diakibatkan oleh struktur flat slab yang rentan terhadap pengaruh gaya lateral, khususnya di Indonesia dengan potensi gempa tinggi. Namun, penggunaan flat slab masih memungkinkan untuk digunakan di daerah dengan potensi gempa tinggi dengan menerapkan Separated Gravity Lateral Resisting System (SGLR System) yaitu desain yang memisahkan antara penahan lateral dan penahan beban gravitasi. Dalam penelitian ini, beban lateral akan dipikul oleh SRPMK dan dinding geser sedangkan flat slab hanya menahan gravitasi. Melalui penelitian ini diharapkan informasi terkait PT flat slab di Indonesia dapat bertambah.

.....Post-tensioned (PT) flat slab is one of the structural systems widely used in several countries such as the United States, Australia, South Africa, Thailand, and India. Compared to other countries, the use of PT flat slab in Indonesia is still relatively small, generally only in basements. This can be caused by the flat slab structure which is vulnerable to the influence of lateral forces, especially in Indonesia with high earthquake potential. However, the use of flat slabs is still possible to be used in areas with high earthquake potential by implementing the Separated Gravity Lateral Resisting System (SGLR System), a design that separates lateral resistance and gravity load resistance. In this study, the lateral load will be resist by the special moment resisting frames and shear walls while the flat slab only resists gravity. Through this study, it is hoped that information related to PT flat slabs in Indonesia can be increased.