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BEHAVIOR OF BEAM AND WALL OUTRIGGER IN HIGH -RISE BUILDING AND THEIR COMPARISON

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ABSTRACT

Tall buildings need a lateral load resisting system to resist the lateral loads induced by wind or earthquake forces. One of the most efficient systems is outrigger. Outriggers are structural systems that support building against lateral loads. Outriggers are rigid horizontal structures designed to improve building overturning stiffness and strength. This paper provides an overview of outrigger systems and studying the comparison of beam and wall outrigger. A three structures of 30 story building was investigated in this research study. Response spectrum analysis was conducted and the behavior of the buildings was determined considering response parameters such as lateral displacement and story drift. It has been shown from this study that the structure with wall outrigger is more efficient than the structure with beam outrigger. One of the most effective techniques is the use of outrigger in structures that can astutely solve the above issues in high-rise constructions.

KEYWORDS: High Rise Building, Lateral Load, Beam Outriggers, Wall Outriggers, ETABS

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