## Application Research on Large Profiled Statues of Steel-Concrete Composite Shear Wall

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Abstract : Twin steel plates-concrete composite shear walls are composed of a pair of steel plate layers and a concrete layer sandwiched between them, which have the characteristics of both reinforced concrete shear walls and steel plate shear walls. Twin steel plates-composite shear walls contain very high ultimate bearing capacity and ductility, which have great potential to be applied in the super high-rise buildings and special structures. In this paper, we analyzed the basic characteristics and stress mechanism of the twin steel plates-composite shear walls. Specifically, we analyzed the effects of the steel plate thickness, wall thickness and concrete strength on the bearing capacity of the twin steel plates-composite shear walls. The analysis results indicate that he the initial shear stiffness and ultimate shear-carrying capacity is not significantly affected by the thickness of concrete wall but by the class of concrete, [2] both factors significantly impact the shear distribution of the shear walls in ultimate shear-carrying capacity. The technique of twin steel plates-composite shear walls has been successfully applied in the construction of a 88-meter Huge Statue of Buddha located in Hunan Province, China. The analysis results and engineering experiences showed that the twin steel plates-composite shear walls have great potential for future research and applications.

**Keywords :** twin steel plates-concrete composite shear wall, huge statue of Buddha, shear capacity, initial lateral stiffness, overturning moment bearing

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