

Research for Hollow Reinforced Concrete Bridge Piers in Korea

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Abstract : Hollow section for bridge columns has some advantages. However, current seismic design codes do not provide design regulations for hollow bridge piers. There have been many experimental studied for hollow reinforced concrete piers in the world. But, Study for hollow section for bridge piers in Korea has been begun with approximately 2000s. There has been conducted experimental study for hollow piers of flexural controlled sections by Yeungnam University, Sung kyunkwan University, Korea Expressway Corporation in 2009. This study concluded that flexural controlled sections for hollow piers showed the similar behavior to solid sections. And there have been conducted experimental study for hollow piers of compression controlled sections by Yeungnam University, Korea Institute of Construction Technology in 2012. This study concluded that compression controlled sections for hollow piers showed compression fracture of concrete in inside wall face. Samsung C&T Engineering & Construction Group has been conducted study with Yeungnam University for reduce the quantity of reinforcement details about hollow piers. Reduce the quantity of reinforcement details are triangular cross tie. This study concluded that triangular reinforcement details showed the similar behavior as compared with existing reinforcement details.

Keywords : hollow pier, flexural controlled section, compression controlled section, reduce the quantity of reinforcement, details

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