Rationalization of Shear Design Method for Upper Slabs of Caisson Foundation Based on Load Carrying Mechanism

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In upper slabs of caisson foundation, the height and the amount of reinforcement tend to increase with an increase in earthquake load for seismic design. So we carried out loading tests and FEM analysis for upper slabs of caisson foundation. As a result, we proposed a new design method which takes into consideration the effective width on the pull out side based on crack pattern of test specimens, which is not considered in the existing design method. Moreover, we proposed a rational design method based on load carrying mechanism for upper slabs of caisson foundation and made clear that the proposed design method could improve its accuracy and economy.