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STRUCTURAL ENGINEERING / EARTHQUAKE ENGINEERING

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[\[Image PDF \(865K\)\]](#) [\[References\]](#)**OPTIMIZATION OF DESIGN SEISMIC COEFFICIENT BASED ON
TOTAL EXPECTED COST FOR GRAVITY TYPE QUAY WALLS**Koji ICHII¹⁾

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An optimization procedure for the design seismic coefficient for gravity type quay walls is discussed based on the risk management concept. First, seismic risk evaluation for 280 ports in Japan is conducted to obtain the optimum design seismic coefficient. Second, the variation of the optimum seismic coefficient for the important quay wall or the quay wall with longer service life than usual is examined. Finally, the relationship between peak ground acceleration given by seismic hazard analysis and the optimum design seismic coefficient is examined. The results indicate that the current design seismic coefficient is regarded as reasonable since it is close to or conservative of the optimum design seismic coefficient.

Key Words: quay wall, seismic coefficient, seismic risk, risk management, seismic performance

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