New Type of Spread Foundations Composed of Micropiles and Soilbags to Reduce Seismic Response of Structure

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The authors propose a new type of foundations composed of micropiles and soilbags. The foundations are characterized by laying soilbags on the pile head and constructing structures on the soilbags. The expected effects are omissions of junction structures of piles and footing, smaller diameter of piles, and reduction of response acceleration of structures. In this study, to clarify the mechanism of seismic response of the proposed foundation, shaking table tests targeting piers on the supporting ground and on the proposed foundation were carried out. Moreover, reproduction analysis of shaking table tests was conducted, and seismic response of proposed foundation can be reproduced by the analysis model.