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PRINT ISSN : 0289-8063

## STRUCTURAL ENGINEERING / EARTHQUAKE ENGINEERING

Vol. 19 (2002) , No. 2 pp.209s-219s

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## DEFORMATION OF SANDY DEPOSITS BY REVERSE FAULTING

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(Received: September 3, 2001)

We performed sandbox tests and numerical analysis of the tests to investigate the deformation of the sand by reverse faulting. Test results can be simulated generally well by FEM using elasto-plastic solid elements and joint elements, if the stress-strain relation of the sand is adequately modeled. We applied our numerical model to prototypic real scale sandy alluvium model. The analyses of 30m, 50m and 75m deep alluvium suggested that the failure surface propagates through the alluvium if the vertical bedrock fault displacement reaches 3-7% of the depth of the alluvium. It is unlikely that the shear failure propagates through 100m deep alluvium.

**Key Words:** earthquake fault, reverse fault, deposits, elasto-plastic analysis, FEM[\[Image PDF \(879K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Hisashi TANIYAMA and Hiroyuki WATANABE; "DEFORMATION OF SANDY DEPOSITS BY REVERSE FAULTING", *Structural Eng./Earthquake Eng.*, Vol. 19, No. 2, pp.209s-219s, (2002) .

