

عنوان مقاله:

A NEW LAGRANGIAN CURVILINEAR FLUID ELEMENT FOR THE SEISMIC ANALYSIS OF ARCH DAM-RESERVOIR SYSTEMS

محل انتشار:

دومین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1374)

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خلاصه مقاله:

For effective solution of arch dam-reservoir dynamic interaction and other structure-fluid systems, new, ۲۱-noded and ۲۷-noded, ۳-D, Lagrangian curvilinear fluid elements are formulated and incorporated into an existing general purpose PC-run structural analysis program. The effect of surface waves is readily included in the formulation. To model the true behaviour of water at the dam interface, an effective ۱۸-noded compatible interface element is also formulated and added to the program. The program is uniquely capable of carrying out a modal superposition seismic analysis in which the user is able to select the appropriate modes required for the analysis. To eliminate the problem of zero-energy modes, in addition to the introduction of rotational constraints and low frequency surface modes as used before, a new "shift" method is also introduced. The method is applied to the dynamic and seismic analysis of a number of dams and the accuracy of the results is checked against other solutions.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1281442>

