عنوان مقاله:

Analysis of Rectangular Reinforced Concrete Liquied Tanks by Using Yield Line Theory

محل انتشار:

چهارمین کنفرانس بین المللی مقاوم سازی (سال: 1391)

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خلاصه مقاله:

In the analysis of rectangular reinforced liquid storage tanks, a method assuming linear-elastic behavior for material can be used, i.e. strip method, moment coefficient method, finite element method, etc. In the analysis of these types of tanks, tank walls can be considered as a slab. In this study tank walls are analyzed as a slab subjected to hydrostatic loading; in the analysis the yield line theory is used because it is more suitable for the linear inelastic behavior of reinforced concrete slabs than the ones based on linear elastic theory. An iterative algorithm based on yield line theory is presented for the design of isotropically reinforced recrangular concrete slabs supported along all four edges. A computer program is coded which predicts the location of yield lines for the slabs depending upon certain parameters. As a result of this prediction, manual design of such slabs can be significantly simplified by the use of coefficient obtained by using the program

کلمات کلیدی:

Liquid tanks, reinforecd concrete, reinforced slads, yield line

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