

عنوان مقاله:

Methods of Simulating Ship Waves in Shallow Waters

محل انتشار:

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خلاصه مقاله:

In this paper the numerical methods of simulating shallow-water ship-waves are investigated. Two regions of study field which are called far-field for the flow far from ship and near-field for flow near ship are considered in this study. For estimating the far-field region three solution techniques are defined as shallow-water or Airy equations, shallow-water wave equations of Boussinesq type and Michell's equations. Michell's formulation can approximate both near and far field regions. In the near-field, to approximate the flow generated by a slender ship the technique of matched asymptotic expansions is used in several numerical approaches. The results from literature showed that among these solution techniques, Michell's formulation is not only simpler than the other methods for numerical approaches, but also is economical in relation to hardware requirements.

کلمات کلیدی:

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