

河流与海洋

波浪作用下黄河口埕岛海域海床非均匀液化研究

常方强 1, 贾永刚 1, 常方伟 2

1. 中国海洋大学 环境科学与工程学院, 山东 青岛266100;
2. 黎明职业大学 土木建筑工程系, 福建 泉州362000

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摘要 给出了一种风浪作用下基于静力触探试验资料海床非均匀液化计算的方法. 由于土性的非均匀性, 土体液化在空间上存在差异性. 首先讨论黄河口埕岛海域海床土质在空间上的非均匀性, 然后基于静力触探试验数据建立风浪作用下液化计算模型, 计算土体液化在空间上的非均匀性. 通过研究表明, 海床液化不一定从表面开始, 往下扩展, 而是容易出现在软弱层中. 土性水平向上的非均匀性, 导致不同区域的液化深度存在差异, 埕岛海域在10级风浪作用下液化深度可达3.6~5.0 m. 在水动力和重力作用下, 土体液化失稳后可形成凹凸不平的地貌现象.

关键词 [黄河口](#); [埕岛海域](#); [海床](#); [非均匀](#); [液化](#)

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Study on seabed non uniformity liquefaction under wave forces at Chengdao Sea of Yellow River estuary, China

CHANG Fangqiang 1, JIA Yonggang 1, CHANG Fangwei 2

1. [JP2] Faculty of Environmental Science & Engineering, Ocean University of China, Qingdao Shandong266100, China [JP];
2. Faculty of Civil Engineering, Liming Vocational University, Quanzhou Fujian362000, China

Abstract

The study was carried out based on CPT data. Firstly, the soil non uniformity of Chengdao Sea at Yellow River estuary was discussed. Then one model for analyzing the liquefaction based on CPT data was established, and the liquefaction degree of Chengdao Sea was calculated. Results show that, liquefaction does not always begin from surface of seabed to down expansion, but easily appear at the weak layer. The soil horizontal non uniformity induced different liquefaction depths, and can reach 3.6 5.0 m under 10 th storm waves. Under the water and gravity force, the liquefied soil could fail and form rugged topography.

Key words [Yellow River estuary](#) [Chengdao Sea](#) [seabed](#) [non uniformity](#) [liquefaction](#)

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通讯作者 贾永刚 yonggang@ouc

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