Study on Wave Characteristics Based on Field Data Analysis: A Case Study of Jask

Asgari, Hamid Reza[1]; Shanehsazzadeh, Ahmad[2*];
Akbari, Gholam Hossein[3]; Ardalan, Hossein[4]

1- ME in Water Engineering, Shahid Nikbakht School of Engineering, University of Sistan and Balouchestan, Zahedan. Iran. Email: hr.asgari68@yahoo.com

2- Assistant Professor of Hydraulics, Department of Civil Engineering, University of Isfahan, Isfahan, Iran. Email: a.shanehsazzadeh@eng.ui.ac.ir

3- Associate Professor of Civil Engineering, Department of Civil Engineering, University of Bojnord, Bojnord, Iran. Email: gakbari@hamoon.usb.ac.ir

4- Faculty Member, Institute for Water Research, Tehran, Iran. Email: hardalans@gmail.com

Abstract

Analysis and interpretation of field data independently or together with the numerical simulations determine the general characteristics of oceanography parameters in an interested study area. In this context, the general pattern of waves, its origin and the seasonal composition and the statistical distribution of the annual and seasonal wave height, period and direction are of outmost importance, by which, the crucial information for managerial purposes, coastal engineering plans and construction of onshore and offshore structures. In this article, the one year data of wave field nearby the Jask port at Northern Gulf of Oman are processed, analyzed and interpreted. The results were compared with ISWM numerical modeling results. Based on the results, the maximum observed significant wave height and the wave peak period were respectively 2.51 meters and 17 seconds. The dominant wave direction is the southeast with 45% occurrence. The interpretation of the general pattern of the waves on the East Coast of Hormozgan based on measured data including the percentages of seas and swell is of the advantages of this research.

Keywords: *Wave field data, Jask port, Processing and data analysis, ISWM.*