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Wave Pressure Metering with the Specific Instrument and Measure Description Determined by the Shape and Surface of the Instrument including the Number of Sensors and Angle between Them

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Abstract : Focus of this paper is description and functioning manner of the instrument for wave pressure metering. Moreover, an essential component of this paper is the proposal of a metering unit for the direct wave pressure measurement determined by the shape and surface of the instrument including the number of sensors and angle between them. Namely, far applied instruments by means of height, length, direction, wave time period and other components determine wave pressure on a particular area. This instrument, allows the direct measurement i.e. measurement without additional calculation, of the wave pressure expressed in a standardized unit of measure. That way the instrument has a standardized form, surface, number of sensors and the angle between them. In addition, it is made with the status that follows the wave and always is on the water surface. Database quality which is listed by the instrument is made possible by using the Arduino chip. This chip is programmed for receiving by two data from each of the sensors each second. From these data by a pre-defined manner a unique representative value is estimated. By this procedure all relevant wave pressure measurement results are directly and immediately registered. Final goal of establishing such a rich database is a comprehensive statistical analysis that ranges from multi-criteria analysis across different modeling and parameters testing to hypothesis accepting relating to the widest variety of man-made activities such as filling of beaches, security cages for aquaculture, bridges construction.

Keywords : instrument, metering, water, waves
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