

Some results of modelling of random wind and waves in the Adriatic for ship performance assessment*

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Simultaneous action of random wind and waves has in certain circumstances a primary role on the ship rolling and seakeeping in general. Small ships operating in limited sea areas are more sensitive to adverse environment than bigger ones. Therefore the main accent is placed on enlarging the spectral method of assessing the ship rolling by including simultaneous action of the random wind and waves. In order to make it possible, complete definition of the standard natural environment for the Adriatic Sea is given on the basis of own *in-situ* measurements. It includes wave and wind spectra, relation between wind speeds and significant wave heights, frequency of the sea states occurrences, long-term predictions of extreme individual wave heights and wind speeds as well as a standard series of average hourly speeds of stormy winds.

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