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## Experimental Study on Primary Energy Conversion Characteristics of Backward Bent Duct Buoy

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**Summary:** Backward Bent Duct Buoy (BBDB) is a kind of oscillating water column type wave energy converter invented by Masuda. BBDB is said that it has superior primary conversion efficiency and the mooring cost is small. However, some problems are left to be made clear, for example the relationship between body shape and its motions, and the relationship between primary conversion efficiency and its motions. A number of physical tests for motions of five different BBDB models were carried out in this research. From the experimental results, the effects of BBDB body shape to the primary conversion efficiency are obtained. In addition, the measurement of incident wave height is very important to estimate an accurate performance of wave energy converter. But, it is not so easy to take an accurate measurement of the incident wave height because of the existence of reflected wave in wave basin. So some methods to measure wave and motions of BBDB in this basin are shown in this research.

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