About "GUNKAN-NAMI" (warship wave) which Reaches on the Imabari Beach as Significant Breakers.

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Abstract: The significant breakers occurred on the beach of Imabari, when 3DEs of 7th Escort Division on July 1959 and DD "TAKANAMI" belonged Kure Regional District, on February 1960 passed along the Bungonada Course to west, shown on fig. 1 and these breakers damaged some fishers and many fishing boats on the beach.

Taking consideration of these accidents, JMSDF conducted the ship running test off Imabari of the same course by DD on July 1960, with the object of obtaining the necessary data to navigate safely on that sea.

In this paper, we report the outline of this test and the results obtained by making use of these observed data. They may be summarized as follows:

1. Even if the ship turns to the west from the south-west near No. 1 Buoy, the transverse waves created before she turns continue to advance directly toward the coast of Imabari, because the coastal line makes a right angle with Bungonada Course.

2. As the ship moves at 22 knots or more, these waves are refracted by the effect of the bottom topography on their way, and their orthogonals concentrate at the central part of this coast and Mihoko beach. As the result, these waves become higher in height at these beaches. But, when ship speed is 18 knots or less, Gunkan-nami does not quite appear or a little, because these waves are not affected by the bottom topography except near the coast.

3. Gunkan-nami becomes higher especially off the central part of Imabari beach. Tidal current bends the direction of wave to current direction, so, these higher waves reach Mihoko beach while north current and Tempozan beach while south current.

4. Even if the type of ship is different, we can roughly calculate about the height of Gunkan-nami, if the ship speed, the transverse waves' height and the length of the wave crest are known.

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