

10. MEASUREMENT OF WAVE PROFILE GENERATED BY THE TOWING CARRIAGE

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The model tests in the towing tank are carried out assuming that the water surface is completely flat. But in reality, the water surface under the carriage is not flat, as the running carriage changes the pressure distribution in the air.

I would like to present the typical results of wave profile measurement made at our two towing tanks. The plan and section of them are shown in Fig.1. The structures of carriage of large and high speed towing tank are truss type and box girder type respectively. The water depth and distance between carriage and water

surface of large towing tank were 6.976m and 1.044 m, and those of high speed towing tank were 2.750 m and 1.180 m. The wave height was measured by an electric servo type wave probe placed at the center and 150 m from the west end of the towing tank.

The results of the measurement are shown in Fig.2 and Fig.3.

From these figures, it can be said that special attention should be paid to this phenomenon.

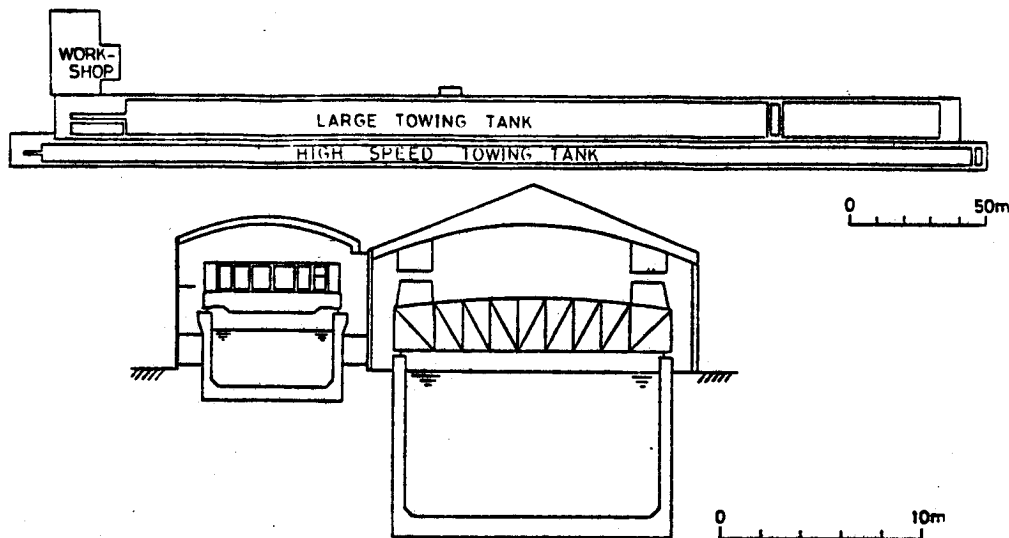


Fig-1 Plan and Section of Large and High Speed Towing Tank

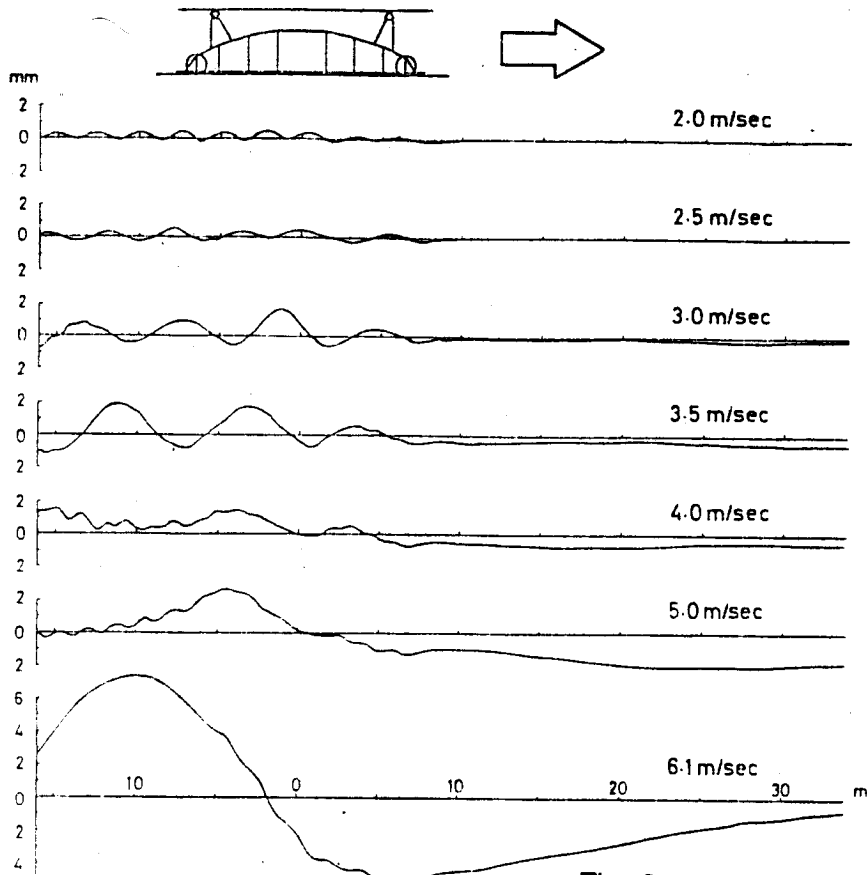


Fig. 2 Wave Profiles generated under the Carriage of Large Towing Tank

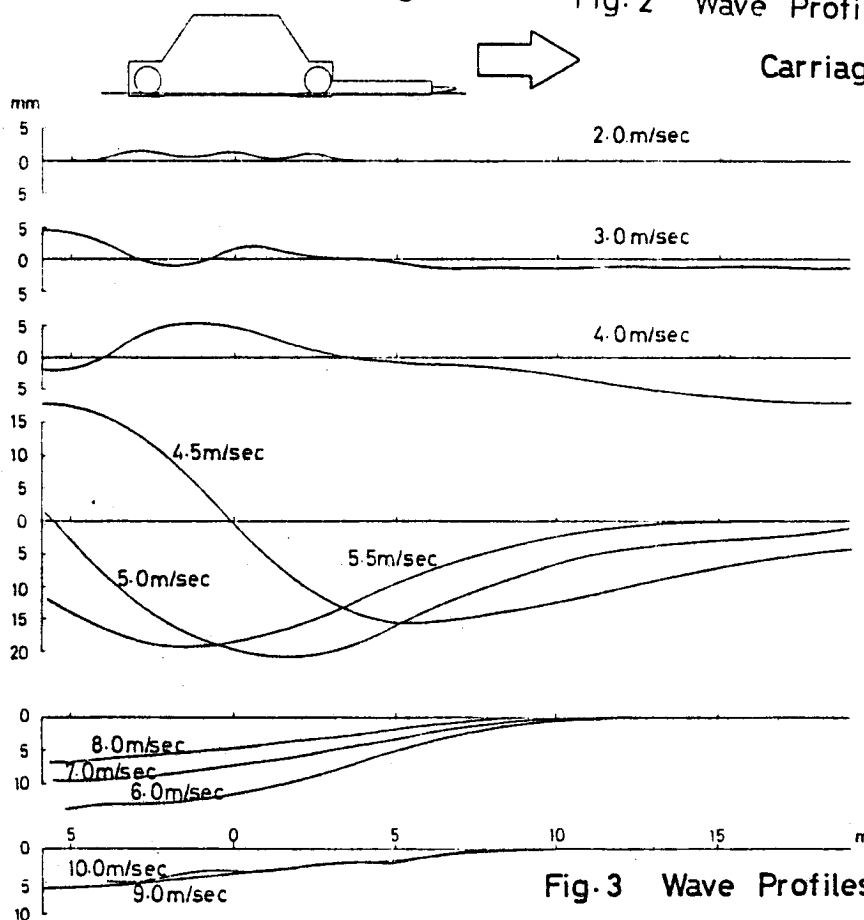


Fig. 3 Wave Profiles generated under the Carriage of High Speed Towing Tank