UNIVERSITI TEKNOLOGI MARA

TIDAL DATUM TRANSFER BY USING SIMULTANEOUS OBSERVATION METHOD BASED ON VARIATION OF DISTANCES IN SEMI-DIURNAL AREA

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Thesis submitted in fulfillment
of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Tides differ from location to location. A fixed offset from another datum usually used to define the chart datum for a certain area. As the datum is important to start the survey, the datum may be obtained by transfer the tidal datum from the control stations. Therefore, the chart datum can be defined by using several methods such as simultaneous observation method, levelling height difference and others. This research is aim to determine the optimum distance for the tidal datum transfer. It specifically studies in the semi-diurnal area along the west coast of Peninsular Malaysia. It is based on the data obtained from the tidal observations at the site area which is in Kg. Baru, Lumut and obtained from JUPEM for the control stations. There are four control stations were used which are Langkawi, Penang, Lumut and Port Klang stations. The data was analysed to compute the tidal datum from the variation of control stations distances and estimate the accuracy of the datum transfer from the control stations. The research suggested that the most accurate value of tidal datum transfer is the shortest distance of control stations and the site area. The results of the study also showed that the seafloor profile also affect the accuracy of the datum transfer. It is hope that the study can contribute to the improvement of tidal datum transfer in semi-diurnal area and also in diurnal area.

TABLE OF CONTENT