

PORT EXPANSION SIMULATION MODEL

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Abstract

This paper presents a user-oriented port expansion simulation model that determines the future economic port capacity to meet the projected demand. The model consists of two parts; a physical impact simulation, and an economic impact simulation. The first part of the model simulates the effects caused by the port capacity expansion. The second part evaluates the port economics due to changes in the port capacity.

The model was validated by applying it to the actual port expansion followed at the Port of Mobile, Alabama. A case study is then presented to demonstrate the capacity of the model with a coal handling port, the McDuffie Terminals at the Port of Mobile.