EFFECTS OF BREAKWATER LOCATION

ON

BREAKWATER PERFORMANCE

By

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ABSTRACT

A study was conducted in the laboratory to determine the effects of breakwater location on its ability to absorb the wave action. A model breakwater was constructed in the wave basin using aggregates measurements were carried out to measure the wave heights in front and behind the breakwater.

Tests were conducted for two difference breakwater locations under different wave conditions. Results were presented to show the breakwater absorption in terms of reduction in the wave heights measured in front and behind the breakwater.

CHAPTER 1.0

INTRODUCTION

1.1 GENERAL

In Coastal Engineering the term of 'Break' and 'Water' means to break the water. In addition to that breakwaters may function as protection against sediment transports in littoral zone. Most breakwaters are land connected. Normally, rubble-mound breakwater is very familiar type among the others.

Rubble-mound breakwaters are structures built of quarried rock or other stone materials. Generally, the larger rock amour stones are used for the outer layer, which must protect the structure against wave attack. Breakwaters also generally serve the purpose of providing quiet water for anchorage or mooring of vessels, protected from the attack by waves and or currents. Stones in this outer layer are usually placed with more care to obtain a better interlocking and consequently better stability. Although other materials (concrete, bitumen, etc.) are also used for this outer layer, but in this our project only use with rock.

Rubble-mound breakwaters are attractive because the outer slope forces storm waves to break and thereby dissipate their energy, causing only partial reflection. A typical breakwater is shown in *Figure 1.1.*