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Kota Kinabalu Port Expansion Project

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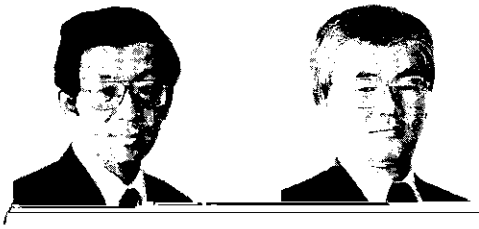
Synopsis :
The Kota Kinabalu Port expansion projec t in Kota Kinabalu, Sabah, Malaysia was started in May 1985 and successfully comple ted in November 1987 by Kawasaki Steel Corporation. The major feature of this proj ects is that KPP (Kawasaki plastic-coated pipe) piles, a total number of 1429, were used. This method was adopted as the most effective anti-corrosion protection system for the heavy corrosive marine environment which existed in this tropical area. Driving su ch a large number of piles offshore in close proximity to each other was an unusual undertaking. In addition, the execution plan was carefully considered in order not to da mage the high corrosion resistance coating during installation of the piles. The proble m of movements of existing piles due to new pile driving was investigated and an evalua tion method was utilized for the movements of the adjacent ground. The results of this evaluation were then compared with actual data.

The body can be viewed from the next page.

Kota Kinabalu Port Expansion Project*



Synopsis:

The Kota Kinabalu Port expansion project in Kota Kinabalu, Sabah, Malaysia was started in May 1985 and successfully completed in November 1987 by Kawasaki Steel Corporation. The major feature of this project is that ***KPP*** *(Kawasaki plastic-coated pipe) piles, a total number*

This report presents an outline of the Kota Kinabalu South Jetty) expansion of the existing jetty (North

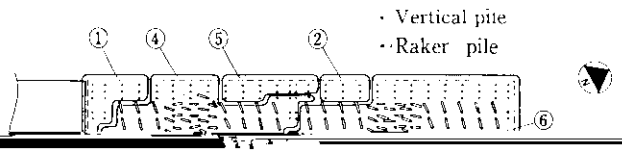
Port expansion project in particular the execution of Extension) and construction of power and water facili-

Table 3 Comparison of steel pipe pile foundation system

Item	Original design	Final design using KPP piles
Diameter (mm)	660	660

formula for bearing capacity of pile

Although it had been decided to apply Hiley's formula as the dynamic formula for the bearing capacity of the piles, a specific equation was not designated, and



3.3.3 Pile load test

As mentioned earlier, pile load tests were conducted at four locations as part of the bearing capacity quality control. A pull-out test was first conducted and then

after redriving. A total of 8 tests were conducted. A

load was 150% of the design load, with an 88-t result for the pull-out test and 180 t for the compression test. Results of the pile load tests are shown in **Table 4**, which also indicates the ultimate bearing capacity for a pile estimated using the dynamic formula for bearing

The test pile for the New South Jetty was pulled out

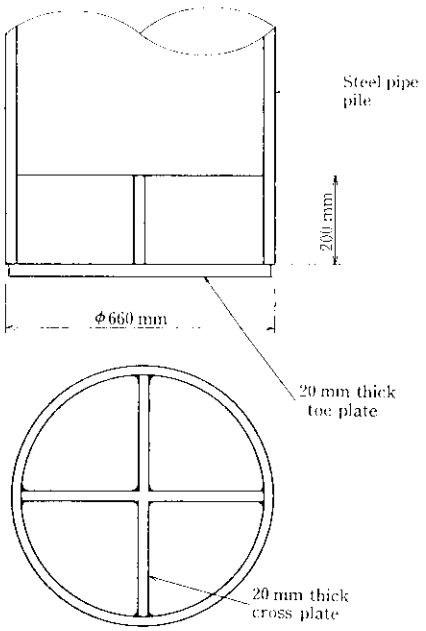
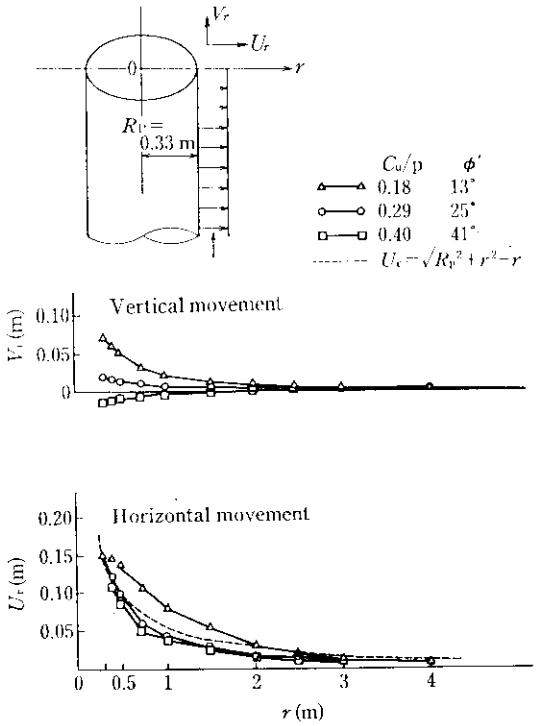
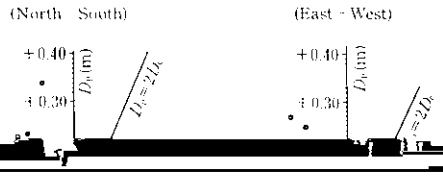


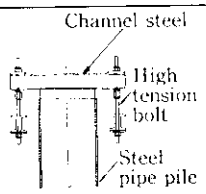
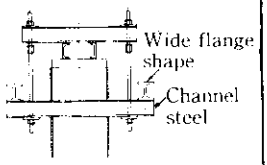
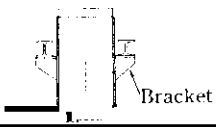
Fig. 9 Closed end pile





(2) Wave action
(3) Deviation from the design center of the piles and stability during concrete placement
(4) Method and procedure for assembly and disas-

Table 5 Comparison of support system

Type of support	Sketch	Advantages	Shortcomings
Hanger type (1)		· Less temporary embedded steel than hanger type (2). · Easy installation.	· Application to raker pile is difficult. · Small allowance for pile deviation.
Hanger type (2)		· Large allowance for pile deviation. · Location of hanger bolt can be selected at any point.	· Large quantity of temporary embedded steel. · Takes time for installation.
Bracket type		· No embedded steel. · Easy installation.	· Removal and repair of coating is required. · Application to raker pile is difficult. · Welding of bracket is affected by