

# **APPLICATION THE COCONUT TRUNK AS THE PILED FOUNDATION FOR A JETTY**

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## **ABSTRACT**

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The coconut trunk is widely used in the other island country like Maldives, Indonesia and others. Although the use of coconut trunk as piled foundation is not recognized in other country, some contractors and developers are very confident that the coconut trunk can actually being used for piling for the jetty due to the coconut trunk natural density and strength.

The use of coconut trunk in piling brings advantages and disadvantages. The coconut trunks are not only economical, the compressive strength is better than other of timber pile and the length of coconut trunk is longer than other type of timber pile. However, the coconut trunk may be damage if they are not fully submerged under the water table level. So, it needs to do the preservation for the part coconuts tusk which is not in the water.

The choosing of piling equipment is very important because it will cause the piles damaged and crack. Drop hammer is used for the driven of the coconut trunk. To install the piles into marine clay, the drop hammer just pushes the piles with small force, because the clay of the river is marine clay, also consider with soft clay. The contractors normally using the drop hammer for piling the timber pile. When driven the coconut trunk, the better way is using the piled helmet to protect the top part of the pile, it will not damaged the top of the pile.

The design is suing the coconut trunk as the piled foundation of the fishing jetty. The design of the coconut trunk is considered to be a single pile. The coconut trunk is considered to be a single pile. The design includes the slab, beam, pile cap and the piled foundation. The pile cap is using to connect and transfer the load to the piled. The area of the fishing jetty is about 82500m<sup>2</sup>.