

Project Name

GUI Tool for estimating extreme-wave impact-forces on coastal deck structures

Technical Description

This tool calculates the impact forces using various theoretical formulations by different research groups. Tool allows us to calculate five different methods, including McPherson, AASHTO (Type III, Type IV & Type VI), Solitary Waves, Focused Waves, Breaking Waves, etc. Inputs are Structural dimensions and wave characteristics. A deck structure of the T-type was used to study the wave impact on coastal deck structures under hurricane conditions. The coefficients are derived for different scenarios to give the peak slamming force.

Advantages of using this GUI tool

This Graphical user interface (GUI) tool lets you perform calculations more efficiently, faster & with greater accuracy. All methods when performed manually, each method takes about 30 minutes, but this tool can solve those calculations without errors in just few seconds.

How to use this Tool

1. First, you will see the 'Welcome' window. Read description of tool then click '[Let's Go](#)'.
2. Please enter your inputs and click on '[Next](#)' button. You can take help from diagram to understand the parameters better.
3. Select the required method. You will see description & reference of respective method. It is only for your benefit. Click '[Compute Wave Forces](#)' button to process.
4. Final results will be seen with the selective method name. You can save both inputs & results by clicking '[Save File](#)'. You have 3 options to save your results such as .txt, .xlsx, .csv or all files format, etc.
5. If you want to reach out to us, Please click on '[About Us](#)'. Have a look at our endeavors. '[Link](#)' is provided to reach out to us. Please suggest for any improvements or bucks by filling the form using '[Submit](#)' button.

#Note: You can switch tabs directly by clicking on the tabs under main heading of GUI Tool.

Thank You