OBJECTIVES

This course intended to introduce the general principles and considerations involved in the design of maritime structures especially the environmental and design loadings on the structures. The trainer will introduce the various types of jetty layouts, including breasting and mooring dolphins.

In addition, design of the above structures will be taught in detail with actual examples. Fender design is one of the key factors in docking (or berthing) of the ship and forming an important loading to the jetties and dolphins. The function and terminology used in maritime structures will also be explained.

The course also includes the computation of wave forces on piles and seawalls, and design of Breakwaters and groins.

A complete design calculation of as-built Maritime Facilities consists of a Jetty (Loading Platform), two Breasting Dolphins and a pair of Mooring Dolphins for berthing of different sizes of oil tankers will be included the course.
COURSE OUTLINE

- Introduction of Port and Maritime Structures
- Environmental and Design Forces on Maritime Structures
  Introduction to various types of maritime structures, function, terminology and environment. General design considerations: criteria, requirements, site selection and layout. Impacts of maritime structures on environment. Design forces on maritime structures: Wind, current, wave, docking force, mooring line force, earthquake (if applicable) in addition to the dead, superimposed and live loads.
- A Typical Jetty Layout Plan
- Fender Design
- Breasting Dolphin Design
  Introduction of various types of maritime structures consist of jetty (loading platform), breasting and mooring dolphins. Selection and design of rubber fenders. Breasting Dolphin: Selection, functions, loadings and design.
- Mooring Line Forces
- Mooring Dolphin Design
  Mooring line patterns for securing ships. Computation of mooring line forces. Mooring Dolphin: Selection, functions, loadings and design.
- Forces on Jetty (Loading Platform)
- Jetty (Loading Platform) Design
  Jetty (loading platform): General consideration, selection, functions, loadings and design.
- Wave Forces on Piles, Seawalls and Breakwater Design
  Computation of wave forces on piles and seawalls. Breakwaters: Types, selection and design.
- A complete design calculation of an as-built Maritime Facilities consists of a Jetty (Loading Platform), two Breasting Dolphins and a pair of Mooring Dolphins for berthing of different sizes of oil tankers.
Course Registration

Please click on http://www.ies.org.sg/event_view.php?event_id=1261 for more information and online registration.

Duly filled registration form can be fax to us at 6463 9468.

Enquiries: Karen Phua 6463 9211, 6461 1239 or karen@iesnet.org.sg

Best regards
Jasmine Chua
Admin Executive

Meetings & Events
Research, Technology and Standards Group – Infrastructure Cluster

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