THE ROYAL INSTITUTION OF NAVAL ARCHITECTS

BASIC DRY DOCK TRAINING COURSE

TOPICS AND PROGRAMME

This four-and-a-half day course covers the fundamentals and calculations of dry docking. The course begins with the basics and safety concerns, and progresses through all phases of dry docking: preparation, docking, lay period, undocking, and ends with a discussion of Accidents and Incidents.

The course is designed to be relevant to Dock Masters, Docking Officers, Engineers, Naval Architects, Port Engineers and others involved in the dry docking of ships and vessels. The course is presented through classroom lectures, student participation in projects and practical application exercises. The course addresses the deck plate level of practical operation needed by the dock operator and the universally accepted mathematical calculations required to carry out operations in accordance with established sound engineering practices.

TOPICS:

- Basic dry docking community terminology
- Calculations
- Safe dry docking procedures
- Lay period
- Undocking evolutions
- Docking Plans
- Docking and undocking conferences
- Hull boards
- Vessel stability
- Incidents/accidents

PROGRAMME:

Introduction

Maths Review

Ship Stability

Symbols, Abbreviations, Definitions

Organization of Information

A. Gathering pertinent information
B. Important dry dock references
C. Limitations

Preparing the Drydock

A. Determine docking position of the vessel
B. Determine physical location of basin blocking
C. Keel block locations
D. Trapezoidal loading
E. Draft of instability
F. Multiple Calculations
G. Metric to standard calculation sheet
H. Pumping plan
I. Quick reference sheet
J. Seismic/hurricane considerations
K. Blocking preparations and construction
L. Soft Caps
M. Quality assurance

Readiness to Drydock

A. Establishing dock / vessel communication
B. Physical inspection of the vessel
C. Listed vessels
D. Trimmed vessels
E. A docking checklist

Readiness of Personnel, Gear and Services

A. Systems in support of the docking / undocking operation
B. Ship support systems
C. Work force support systems
D. Emergency systems
E. Readiness of gear
F. Readiness of services
G. Readiness of personnel
H. Commands to line handlers

The Docking Evolution

A. Preparation for docking
B. The deflection plane
C. Critical stages in the docking process
D. Summarized actions to be taken
E. Steps for a typical docking procedure
F. Casualty procedures

Lay Period of Ship in Dock

A. Assigned responsibilities
B. Areas of great concern
C. Check list for the preparation of undocking

The Undocking Evolution

A. Weight control accounting
B. Pre-undocking checks
C. Final check of the dock basin
D. Final preparation for undocking
E. Ballasting and lift off of the ship
F. Flood to depth for exit
G. The ship is hauled out of the dock
H. De-ballast and inspect dock
I. Dock list control during undocking

Special Drydocking Situatuions

A. Unique situations
B. Specially designed ships
C. Unique work in drydock
D. Multiple ship dockings
E. Hauling a ship in off-center
F. Cold weather precautions
G. Extreme overhangs
H. Self-docking drydock section

Docking Incidents/Accidents

A. Background
B. Reporting requirements
C. Analysis and trends

Wrap-Up

A. Situations Exercise
B. Exam
C. Training Wrap-up