



**NORWEGIAN TRAINING CENTER-MANILA**

of

**NORWEGIAN MARITIME FOUNDATION OF THE PHILIPPINES, INC.**



## 52B FRAMO III ADVANCED COURSE

### 2010 DATES:

- Jan 04 – 15
- Jan 18 – 29
- Feb 08 – 19
- Feb 22 – Mar 05
- Mar 15 – 26
- Apr 12 – 23
- Apr 26 – May 07
- May 17 – 28
- May 31 – Jun 11
- Jun 21 – Jul 02
- Jul 12 – Jul 23
- Aug 02 – 13
- Aug 23 – Sept 03
- Sept 13 – 24
- Oct 04 – 15
- Oct 25 – Nov 05
- Nov 15 – 26
- Dec 06 – 17

### DURATION:

**2 Weeks**

(10 days: 0830H – 1630H)

### COURSE

### CONTRIBUTION:

**USD 709.00**

(NSA Member)

**USD 788.00**

(Non-NSA Member)

*Inclusive of course materials/handout*

### NOTE:

Ship's Ratings/Crew and other shipboard personnel intending or required to have extensive FRAMO training, both theories and application, may as well take this course provided they possess the same requirements as above.

This FRAMO course is designed for deck and engine officers directly tasked with the overall operation and maintenance of FRAMO CARGO PUMPING SYSTEM. The course practically provides extensive lectures and practice on the technical design & principles and working & operating mechanics of the system including its key maintenance tasks and troubleshooting techniques.

**COURSE AIMS & OBJECTIVES:** Upon completion of the course, participants should be able to gain technical understanding and acquire practical know-how in the proper operation and maintenance of FRAMO Cargo Pumping System during *loading, cargo sampling, heating/cooling, discharging, stripping, emergency pumping, tank cleaning, purging routines* and *cargo pump performance*. Troubleshooting efforts are given high emphasis to inculcate safe and sound system operation.

**COVERAGE / PROGRAM FOCUS:** Emphasis of instruction and hands-on activities deal with the operational principles and technicalities of the following:

- Basic Hydraulic System Design
- Purging Instruction
- Pumping Theories
- FRAMO Cargo Pump SDS5
- FRAMO Cargo Pump SD125
- FRAMO Portable Pumps and Cargo Pumps
- Hydraulic Principles
- FRAMO Hydraulic Control Systems
- Control Valves
- Oil Cleanliness / Filtration
- Ballast Pumps
- Service Bulletins

For practical exercises, the participants will be involved in the operation of Full-Scale Diesel-hydraulic Powerpack FRAMO Cargo Pump Types SDS5, SD125, TK8, TK4 and Tank Cleaning Pump Type 4 VF-1 (also used as firefighting pump) - Control Panel for Remote Operation, Quick Couplings, Pipes and Tank Arrangement for Full Scale Pumping Arrangement.

**METHOD:** The course is conducted employing:

- Extensive lectures and presentation with cooperative-learning discussions.
- Guided hands-on practice and exercises providing participants' sufficient practice to test run, inspect, disassemble/assemble and operate the various components of the system.
- Knowledge-based and skill-based assessment of trainees' performance
- For maximum teaching-learning conduciveness, class size is limited to ten (10) participants.

**ENTRY REQUIREMENT / TARGET GROUP:** Entry to this course is open to all deck and engine officers duly endorsed for FRAMO training, preferably going onboard vessel equipped with FRAMO Cargo Pumping System.

**COURSE CERTIFICATE:** A Certificate of Completion is given to each participant who satisfactorily fulfills the Course.

# Register

**ADDRESS:** Norwegian Training Center-Manila Gate 2 TESDA Complex, East Service Road, Taguig, Metro Manila, Philippines

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