



**CIRCULAR No. DGGM-015-2005 (AMENDMENT)**

**TO:** PANAMANIAN MERCHANT MARINE CONSULATES,  
REGIONAL TECHNICAL OFFICES AND MARITIME  
TRAINING CENTERS ACCREDITED

**FROM:**

  
**Captain Encarnación Samaniego**  
**GENERAL DIRECTORATE FOR SEAFARERS**

**DATE:** October 28th, 2005

**SUBJECT:** UPGRADE COURSES

---

That, the Republic of Panama, through law No.4 of May 15, 1992, ratified the International Convention on Standard of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995, known as STCW 78/95.

That through Article 33, of Law Decree No.7, of February 10, 1998, The General Directorate of Seafarers of The Panama Maritime Authority is responsible for enforcing existing legal provisions relating to the education, training, certification and watchkeeping of seafarers, in accordance with the Provisions of the International Conventions ratified by the Republic of Panama.

In that sense, the General Directorate of Seafarers has decided to implement the following regulations concerning to Upgrade Courses.

- 1- Seafarers interested in taking these upgrade courses must hold a Panamanian Certificate of Competency.
- 2- Those seafarers who complete the different levels of upgrade courses must apply to the respective Certificate of Competency directly through a Panamanian consulate.



- iv. Cargo cover
- v. Watertight door
- I. Fundamentals of marine electric installation
  - i. Alternators and motor
  - ii. Switch gear and switch board
  - iii. Power system operation
  - iv. Parallel operation
  - v. Batteries and rectifiers
  - vi. Safety and electrical shock
- 4. Tools, instruments and other material
  - a. Concept and application
    - i. Pressure measurement
    - ii. Temperature gauge
    - iii. Level measurement
    - iv. Flow measurement
    - v. Tachometer
    - vi. Vernier caliper
    - vii. Micrometer
- 5. Engine room safety
  - a. Combustible, flammable material and their safe handling
  - b. Pollution prevention, control and awareness
  - c. Chemical and re-agent handling, storage and application
  - d. Safe working practices
- 6. Practical exercises (with the use of simulator)
  - a. Preparing and starting up air compressor and service air compressor
  - b. H.F.O. tanks and F.O. transferring
  - c. Preparing and starting H.F.O. purifier system
  - d. Preparing and starting bilge separator
- 7. Evaluation/assessment
  - a. Written and practical test



- v. Dredge Ship
- vi. Container
- vii. Tug

**3. Knowledge of machineries: Fundamental/operation/maintenance and arrangement**

- a. Machinery arrangement and installation
- b. Diesel engine (main and diesel alternator)
  - i. Diesel engine propulsion
  - ii. Electric generator
- c. Steam/boiler plant
  - i. Type of boilers
  - ii. Exhaust gas boiler/economizer
  - iii. Boiler mounting
  - iv. Water level gauge
  - v. Safety valve
  - vi. Feed system
  - vii. System components
- d. Auxiliary machineries and system
  - i. Basic refrigeration
  - ii. Air Compressor
  - iii. Heat exchanger and coolers
  - iv. Oil/water separator
  - v. Sewage treatment plant
  - vi. Incinerator
  - vii. Piping system
- e. Pumps and pumping system
  - i. Displacement
  - ii. Axial
  - iii. Centrifugal
- f. Bilge and ballast system
- g. Domestic water system
- h. Purifiers
- i. Filters and strainer
- j. Steering gear
- k. Deck and machinery and hull equipment
  - i. Concept of hydraulic and pneumatic
  - ii. Mooring equipment
  - iii. Cargo handling equipment



- b. Emergency and Distress Signals
    - i. Pyrotechnical distress signals
    - ii. Satellite EPIRB
    - iii. SART
  - c. Avoidance of fake distress alerts and action to be taken in the event of accidental activation
7. Evaluation/Assessment
- a. Written and Practical test

## **8. From Wiper to Oiler**

- 1. Must have a seagoing service of twelve (12) months as a wiper
- 2. Must complete the following mandatory/interim course/s taken from the recognized training center.

### **1. Introduction**

- a. The engine department
  - i. The watchkeeping system
  - ii. Operating the watch
  - iii. UMS operation
- b. Checkpoints for safer operation
- c. Duties associated with handling over watch
- d. Routine duties undertaken by engine watch
  - i. Before arrival
  - ii. During maneuvers
  - iii. After maneuvers
  - iv. While in port
  - v. Before departure
  - vi. While at sea

### **2. General knowledge of ship's operation/nomenclature**

- a. Overview of the following vessel:
  - i. Ro-ro vessel
  - ii. Passenger ship
  - iii. Tanker Ship
  - iv. General Cargo



- a. Crowd Management, Passenger Safety and Safety training for Personnel Providing Direct Services to Passengers in Passenger Spaces
- b. Proficiency in Crisis Management and Human Behavior Training in Passenger Safety, Cargo Safety and Hull Integrity training
- c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V/3)

## **7. From Ordinary Seaman to AB**

1. Must have a seagoing service of twelve (12) months as an ordinary seaman.
2. Must complete the following mandatory/interim course/s taken from a recognized training center/s

1. Introduction
  - a. The Course
  - b. Subject Areas
  - c. Basic Principles of Navigational Watch
2. The Ship Organization
  - a. The Master
  - b. The Crew
  - c. The departments
3. Steering and Use of Compass
  - a. Magnetic Compass
  - b. Gyro Compass
  - c. Helm Orders
  - d. The Ship Steering System
4. Keeping a Proper Lookout by Sight and Hearing
  - a. Shipboard Terms and Definitions
  - b. Rules and Regulations on Keeping Proper Lookout
  - c. Responsibilities of Lookout
    - i. Reporting by hearing or by points
    - ii. Identification of the different lights, shapes and sound signals
5. Monitoring and Controlling a Safe Watch
  - a. Internal Communication and Alarm
  - b. A Safe Navigational Watch
  - c. Basic Environmental Protection Procedures
6. Operation of Emergency Equipment and Application of Emergency Procedures
  - a. Emergency Duties and Alarm Signals



3. For tankers - Regulations V/1
  - a. three (3) months approved seagoing service appropriate to their duties on the type or tanker on which they serve.
  - b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquified gas tanker, LNG
  - c. Shore based fire fighting
4. For Ro-Ro Ship(Reg. V/2) and Passenger Ship other than Ro-Ro (Reg. V/3)
  - a. Crowd Management, Passenger Safety and Safety training for personnel Providing Direct Services to Passengers in Passenger Spaces
  - b. Proficiency in Crisis Management and Human Behavior Training in Passenger Safety, Cargo Safety and Hull Integrity Training
  - c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V/3)

**6. From Engine Cadet to Officer In-Charge of the Engineering Watch**

1. MUST have a seagoing service of twelve (12) months as Engine Cadet of which six (6) months has been part of the engine watchkeeping group.
2. MUST complete the following mandatory / interim courses taken from a recognized / accredited testing and training center/s:
  - a. Advanced Fire fighting — A PARTE CARRERA
  - b. Proficiency in Survival Craft and Rescue Boat — ✓
  - c. Medical Emergency — First Aid ✓ HIGIENE NAVAL
  - d. Auxiliary Machinery System ✓
  - e. Control Engineering — SISTEMAS AUTOMATICOS — CARRERA
  - f. Hydraulics / Pneumatics — CARRERA
  - g. MARPOL 73/78 Annex 1 & 2 — CARRERA — CONT. MARITIMA
  - h. Engine Room Simulator Course — with assessment certificate issued by the authorized / accredited testing / training center/s CARRERA
  - i. Ship Security Officer Course — A PARTE CARRERA

3. For tankers - Regulations V/1
  - a. Three (3) months approved seagoing service appropriate to their duties on the type of tanker on which they serve.
  - b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquified gas tanker, LNG (BASICO) CARRERA / ESTIJA
  - c. Shore bases fire fighting
4. For Ro-Ro Ship (Reg. V/2) and Passenger Ship other than Ro-Ro (Reg. V/3)

TRANSPORTE  
ESPECIALES



- a. Three (3) months approved seagoing service appropriate to their duties on the type of tanker on which they serve.
  - b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquefied gas tanker, LNG
  - c. Shore based fire fighting
4. For Ro-Ro Ship (Reg. V/2) and Passenger Ship other than Ro-Ro (Reg. V/3)
- a. Crowd Management, Passenger Safety and Safety training for Personnel Providing Direct Services to Passengers in Passenger Spaces.
  - b. Proficiency in Crisis Management and Human Behavior training in Passenger Safety, Cargo Safety and Hull Integrity Training
  - c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V/3)

**5. From Third Engineer / Second Assistant Engineer / Officer In-Charge of an Engineering Watch TO SECOND ENGINEER**

1. Must have a seagoing service of twelve (12) months as Third Engineer or Second Assistant Engineer or twenty four (24) months as Fourth Engineer (OIC-EW) on board a vessel/s propelled by a machinery of not less than 3,000 KW / 4,000 HP.
2. Must complete the following mandatory / interim courses taken from taken from a recognized / accredited testing and training center/s:
  - a. Advanced Fire fighting
  - b. Proficiency in Survival Craft and Rescue Boat
  - c. Medical Care
  - d. Auxiliary Machinery System
  - e. Control Engineering
  - f. Panama Maritime Law for Ship's Officers (this course will be a requirement starting February 2006)
  - g. Hydraulics / Pneumatics
  - h. MARPOL 73/78 Annex 1 & 2
  - i. Engine Room Simulator Course – with assessment certificate issued by the authorized / accredited testing / training center/s
  - j. Ship Security Course
  - k. Leadership Training Course



- b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquefied gas tanker, LNG
  - c. Shore based fire fighting
4. For Ro-Ro (Reg. V/2) and Passenger Ship other than Ro-Ro (Reg. V/3)
    - a. Crowd Management, Passenger Safety and Safety training for Personnel Providing Direct Services to Passengers in Passenger Spaces
    - b. Proficiency in Crisis Management and Human Behavior Training in Passenger Safety, Cargo Safety and Hull Integrity Training
    - c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V/3)

**4. From Second Engineer / First Assistant Engineer to CHIEF ENGINEER**

1. MUST have a seagoing service of twelve (12) months as Second Engineer or First Assistant Engineer on board a vessel/s propelled by a machinery of not less than 3,000 KW / 4,000 HP.
2. MUST complete the following mandatory / interim courses taken from taken from a recognized / accredited testing and training center/s:
  - a. Advanced Fire fighting
  - b. Proficiency in Survival Craft and Rescue Boat
  - c. Medical Care
  - d. Panama Maritime Law for Ship's Officers (this course will be a requirement starting February 2006)
  - e. Auxiliary Machinery System
  - f. Control Engineering
  - g. Hydraulics / Pneumatics
  - h. Maritime Law for Ship's Officers (with Panama Maritime Law included)
  - i. MARPOL 73/78 Annex 1 & 2
  - j. Engine Room Simulator Course – with assessment certificate issued by the authorized / accredited testing / training center/s
  - k. Ship Security Officer Course
  - l. Leadership Training Course
3. For tankers - Regulations V/1



- b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquefied gas tanker, LNG
- c. Shore based fire fighting

- 4. For Ro-Ro Ship (Reg. V/2) and Passenger Ship other than Ro-Ro (reg. V/3)
  - a. Crowd Management, Passenger Safety and Safety training for Personnel Providing Direct Services to Passengers in Passenger Spaces
  - b. Proficiency in Crisis Management and Human Behavior Training in Passenger Safety, Cargo Safety and Hull Integrity Training
  - c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V/3)

**3. From Deck Cadet to Officer In-Charge of the Navigational Watch SECOND MATE**

- 1. MUST have a seagoing service of twelve (12) months as Deck Cadet of which six (6) months has been part of the deck watchkeeping group on board a vessels/s of not less than 3,000 GRT.
- 2. MUST complete the following mandatory / interim courses taken from a recognized / accredited testing and training center/s:
  - a. Advanced Fire fighting
  - b. Proficiency in Fast Rescue Boat
  - c. Medical Emergency First Aid
  - d. GMDSS / General Operators Certificate (GOC)
  - e. Radar and ARPA - *CARRERA*
  - f. ECDIS - *CARRERA*
  - g. Cargo Handling and Care of Cargo - *ESTIBA - CARRERA*
  - h. MARPOL 73/78 Annex 1 & 2 - *CARRERA*
  - i. Simulator training on Collision Avoidance - *CARRERA*
  - j. Ship Simulator & Bridge Teamwork with BRM - with assessment certificate issued by the authorized / accredited testing / training center/ *CARRERA*
  - k. Ship Security Officer Course - *A PARTE*
  - l. Automatic Identification System (AIS) *CARRERA*
  - m. Introduction to Shipping - *CARRERA (ECONOMIA MARITIMA)*
- 3. For tankers - Regulations V/1
  - a. Three (3) months approved seagoing service appropriate to their duties on the type of tanker on which they serve.



4. For Ro-Ship (Reg. V / \*) and Passenger Ship other than Ro-Ro (Reg. V / 3)
  - a. Crowd Management, Passenger Safety and Safety training for Personnel Providing Direct Services to Passengers in Passenger Spaces
  - b. Proficiency in Crisis Management and Human Behavior Training in Passenger Safety, Cargo Safety and Hull Integrity Training
  - c. Familiarization Training on board ro-ro passenger ship (Reg. V/2) passenger ship other than ro-ro (Reg. V / 3)

**2. From Officer In-Charge of the Navigational Watch TO CHIEF MATE**

1. MUST have a seagoing service of twelve (12) months as Second Mate or twenty four (24) months as Third Mate OIC-NW on board a vessel/s of not less than 3,000 GRT.
2. MUST complete the following mandatory / interim courses taken from a recognized / accredited testing and training center/s:
  - a. Advanced Fire fighting — *Ferns*
  - b. Proficiency in Fast Rescue Boat — *Ferns*
  - c. Medical Care — *DEWITO*
  - d. GMDSS / General Operators Certificate (GOC) — *CARRERA*
  - e. Radar Simulator Course (RSC) and ARPA *canon*
  - f. ECDIS *CPVMS*
  - g. Cargo Handling and Care of Cargo *Canon*
  - h. Panama Maritime Law for Ship's Officers (this course will be a requirement starting February 2006) *DERECHO MARITIMO*
  - i. MARPOL 73/78 Annex 1 & 2 *canon*
  - j. Simulator training on Collision Avoidance *canon*
  - k. Ship Simulator & Bridge Teamwork with BRM – with assessment certificate issued by the authorized / accredited testing / training center / s —
  - l. Ship Security Officer Course *FORCH*
  - m. Automatic Identification System (AIS) — *canon*
  - n. Leadership Training Course — *FORCH*
  - o. Introduction to Shipping — *canon elmer*
3. For tankers – Regulations V / 1
  - a. Three (3) months approved seagoing service appropriate to their duties on the type of tanker on which to serve.



- 3- The training center should issue each participant a certificate of completion for each level of upgrade courses.
- 4- This Circular will be made effective in January 2006.
- 5- The following are the requirements for each level of upgrade courses:

**1. From Chief Officer TO MASTER**

1. **MUST** have a seagoing service of twelve (12) months as Chief Officer on board a vessel/s of not less than 3,000 GRT.
2. **MUST** completed the following mandatory / interim courses taken from a recognized/accredited testing and training center/s:
  - a. Advanced Fire fighting
  - b. Proficiency in Fast Rescue Boat
  - c. Medical Care
  - d. GMDSS / General Operators Certificate (GOC)
  - e. Radar and ARPA
  - f. ECDIS
  - g. Cargo Handling and Care of Cargo
  - h. Panama Maritime Law for Ship's Officers (this course will be a requirement starting February 2006)
  - i. MARPOL 73/78 Annex 1 & 2
  - j. Simulator training on Collision Avoidance
  - k. Ship Simulator & Bridge Teamwork with BRM – with assessment certificate issued by the authorized / accredited testing / training center/s
  - l. Ship Security Officer Course
  - m. Automatic Identification System (AIS)
  - n. Leadership Training Course
  - o. Introduction to Shipping
3. For tankers – Regulations V / I
  - a. Three (3) months approved seagoing service appropriate to their duties on the type of tanker on which they serve.
  - b. Specialized training on the type of tanker on which to serve: Oil tanker, Chemical tanker, Liquefied gas tanker, LNG
  - c. Shore based fire fighting