

# MARINE ENGINEERING SYSTEMS OPERATOR



**WHAT THEY DO** • Marine Engineering Systems Operators (MARENG SYS OPs) are responsible for operating marine engineering equipment aboard naval vessels with diesel-electric propulsion systems. The systems for which they are responsible are diverse and complex; the job is technical and challenging.

## WORKING ENVIRONMENT

Marine Engineering Systems Operators spend much of their time aboard ships. At sea, they are employed on operational, watchkeeping and maintenance duties in machinery spaces on continuously rotating shifts. The work is sometimes very demanding both physically and mentally. Marine Engineering Systems Operators work in confined spaces both above and below the waterline. They are sometimes required to work for extended periods, and the constant loud noise to which they are exposed makes the use of ear defenders mandatory.

## TRAINING

The training of a Marine Engineering Systems Operator starts during the first summer with the Basic Military Qualification (BMQ), a 6 week course that begins with 2 weeks at their home unit and continues at the Canadian Forces Recruit School at CFB Borden, Ontario. If time permits, this course is followed by a 4 week Sea Environmental Course at either the Canadian Forces Fleet School Halifax, in Nova Scotia, or the Canadian Forces Fleet School Esquimalt in British Columbia. During the BMQ course, you will learn about the Canadian Forces rank structure, pay and benefits; the obligations of a CF member; the roles and responsibilities of the CF; the history of Canada's navy; first aid and CPR; military drill,

weapons-handling and fieldcraft; the wearing of uniform and general deportment. The Sea Environmental Course is an introduction to life and work aboard ship that includes fire-fighting, damage control, and watchkeeping. Apprentice-level occupational training for Marine Engineering Systems Operators is as follows.

### *Apprentice Level*

#### **Basic Military Occupation Training**

#### **School**

Canadian Forces Fleet School (CFFS)

#### **Location**

Naval Reserve Unit Québec (Quebec)

#### **Subjects**

*Qualification Level 1 (QL1) – Part 1 Phase I*

- Distance training like a correspondence course in which learners work at their own speed. During this phase, you will learn the following skills:
  - > Describe basic engineering concepts and procedures
  - > Explain the operation of internal combustion engines
  - > Describe the auxiliary systems of Kingston-class ships



### *Qualification Level 1 (QL1) – Part 1 Phase II*

- Formal course where you will learn to:
  - > Monitor the electrical power generation and distribution system
  - > Assist in electrical maintenance
  - > Perform general maintenance duties
  - > Describe propulsion systems
  - > Describe built-in damage-control systems

### **Training Time (Approx.)**

75 hours (Part-time)

3 weeks

### *Advanced Training*

#### ***Journeyman Level***

- > QL2: 4 to 6 months of on-job training aboard a maritime coastal defence vessel leading to successful completion of both the written examination and the selection board to obtain the Level A Certificate and to qualify as an Auxiliary Machinery Operator.
- > QL3 Part 1 Phase I: 55 hours of distributed training at the home unit
- > QL3 Part 1 Phase II: 1 week formal course at the Canadian Forces Fleet School Québec
- > QL3 Part 2: 4 to 6 months of on-job training aboard a maritime coastal defence vessel

### ***Supervisor Level***

- > QL3: Written examination and selection board to obtain the Level B Certificate and qualify as Engineer Officer of the Watch
- > QL4 Part 1: 4 week formal course at Canadian Forces Fleet School Québec
- > QL4 Part 2: 4 to 6 months of on-job training aboard a maritime coastal defence vessel

### ***Department-head Level***

- > Selection board to obtain Level C Certificate and qualify as a Chief Engineer

### **RELATED CIVILIAN OCCUPATIONS**

- > Stationary engineer helper
- > Marine oiler
- > Diesel plant operator

