



Certificate No.

Registration No.

## CERTIFICATE OF COMPLETION

*This certificate is issued to*

*for having attended the*

### ***Diesel Plant Course for Junior Engineer***

#### **Topics :**

##### ***Engine Control System***

- *Schematic Layout of the Engine Control System*
- *Electric Circuit*
- *Directional Control Valves*
- *Maintenance of Directional Control Valves*
- *Electric Source and Components*
- *Engine Control Diagram (Flow Chart)*

##### ***Maintaining a Safe Engineering Watch***

- *General Precautions in Watch-keeping at Sea*
- *Taking Over and Accepting Engineering Watch*
- *Main Engine System Checkpoints*
- *Generator System Checkpoints*
- *Turbo Generator Checkpoints*
- *Stern Tube Checkpoints*
- *Boiler System Checkpoints*
- *Steering Gear System Checkpoints*
- *Checkpoints for Other Auxiliary Machineries*

##### ***Diesel Plant Course***

- *Standard Signals*
- *Feedback Control System*
- *Feed Forward Control System*
- *Cascade Control System*
- *PID Action (Proportional, Integral, Derivative)*
- *Pneumatic Control Valve*
- *Boiler Remote Level Indicator and Alarm System*
- *Meter Body and Pneumatic Transmitter*
- *Resistance Temperature Detectors*
- *Thermocouple Action*
- *Switchboards (Main, Emergency, Distribution)*
- *Emergency Stop and Preference Trip*
- *Requirements for Parallel Operation*
- *Electric Shock*
- *High Voltage Switchboards*

**CAPT. ELISEO Z. CLEMENTE, JR.**  
General Manager