

Part B

Course Outline

MTI shall ensure that all trainees shall be given sufficient time to learn, understand and perform the practical training component of this course. It is understood that the number of hours for demonstration/practical work specified in the table below is indicative and allocated per group. Training hours shall be extended depending on trainees' successful acquisition of the required competence.

Topics	Time Allotment (in hours)	
	Theoretical	Demonstration/ Practical Work
Course Introduction	0.5	-
<i>Competence: Manage the operation of propulsion plant machinery</i>		
1. Design features, and operative mechanism of marine diesel engine, marine steam turbine, marine gas turbine, and marine steam boiler	4.0	-
<i>Competence: Plan and schedule operations</i>		
2. Planning the start-up and shutting down of main and auxiliary machinery, including associated system 2.1 Prior Departure 2.1.1 Legislative Requirements 2.1.2 Planning the operational requirements of main machinery (Diesel Engine) and associated systems 2.2 Prior Arrival 2.2.1 Legislative Requirements 2.2.2 Planning the operational requirements of main machinery (Diesel Engine) and associated systems	12.0	7.0
3. Planning of efficient operation and performance assessment of propulsion plant and auxiliary machinery 3.1 Efficient Operation 3.2 Performance Assessment	4.0	2.0
<i>Competence: Operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery</i>		
4. Start up and shut down main propulsion and auxiliary machinery, including associated systems	12.0	18.0

4.1 Start-up of Main Diesel Engine and auxiliary machinery including associated systems 4.2 Shutting down of Main Diesel Engine and auxiliary machinery including associated systems		
5. Operating Limits of Propulsion Plant	2.5	3.0
6. The efficient operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery	10.0	12.0
7. Functions and Mechanism of Automatic Control for Main Engine 7.1 Diesel Engine	4.0	3.0
8. Functions and Mechanism of Automatic Control for Auxiliary Machinery	5.0	3.0
9. Marine Steam Turbine 9.1 Operating limits of marine steam turbine propulsion plant 9.2 Function and mechanism of automatic control for marine steam turbine propulsion plant 9.3 Surveillance, performance assessment and maintaining safety of marine steam turbine propulsion plant	4.5	4.5
<i>Competence: Manage fuel, lubrication and ballast operations</i>		
10. Operation and maintenance of machinery, including pumps and piping system	2.0	3.0
Sub-total	60.5	55.5
Total Training Hours	116.0	

Assessment	
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Notes:

1. *It is the responsibility of the MTI to determine the number of hours needed for the conduct of assessment both theoretical and practical as maybe applicable taking into account the number of trainees, number of assessors, number of equipment, vis-à-vis the number of test items for theoretical and the number of exercises for practical assessment.*
2. *Time allotted in the practical demonstration shall be construed as the time allotted for 24 trainees, provided that all trainees have demonstrated the task or scenario specific for management level responsibility, and if the practical exercises are conducted by group, the rotation of roles is required.*