ASSESSMENT PLAN

STCW Code: Section A-III/2	Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more	Table A: Table A-III/2	
Approved Training Program	Management Level Course for Marine Engineer Officers (Function 1)	Instructor:	*Date Prepared:*
Resources Needed:		Assessor:	*Approved by:*

Topics	**Written Assessment**				**Practical Assessment**				
					Assessment Task				***Grading Scheme***
	No. of Test Items	**Assessment Method**	**Assessment Period**	**Grading Scheme**	1. Supervise the function test of all critical equipment and machinery based on general company requirements and instruction manual. 2. Plan the starting up of main diesel engine and associated systems in accordance with general company requirements in a given scenario. 3. Plan the shutting down of diesel engine and associated systems in accordance with general company requirements in a given scenario. 4. Plan a ship's energy efficiency in accordance with company Ship's Energy Efficiency Management Plan	6. Manage the preparation of main diesel engine for the start up and make available fuels, lubricants, cooling water, and air in accordance with company requirements in a given scenario. 7. Supervise the checking of the pressures, temperatures, and revolutions during the start-up and warm-up period in accordance with safe working practices and agreed work plans in a given scenario. 8. Conduct surveillance of main diesel	15. Verify the load capacity of main diesel engine and auxiliary machinery using various methods in accordance with technical specifications in a given scenario. 16. Supervise the operation of the main diesel engine and auxiliary machinery to maintain safety in accordance with safe working practices and technical specifications in a given scenario. 17. Supervise the conduct of surveillance and performance check of automatic	23. Manage the carrying out of fuel and ballast operations in accordance with safe working practices so as to prevent pollution of the marine environment in a given scenario**.**	

					(SEEMP) in a given scenario. 5. Plan the performance assessment of main propulsion plant and auxiliary machinery in accordance with company requirements in a given scenario	engine and its associated auxiliary systems to maintain safe operating conditions in accordance with company requirements in a given scenario. 9. Check the performance of main diesel engine and associated system in accordance with bridge orders and technical specifications in a given scenario. 10. Supervise the preparation of the main diesel engine for the shutting and cooling down operation in accordance with company requirements in a given scenario. 11. Conduct surveillance of the shutting down of main diesel engine and its associated auxiliary systems to maintain safe operating conditions in accordance with company requirements in a given scenario.	control system for main engine to maintain safe operating conditions in accordance with manufacturer's manual in a given scenario. 18. Supervise the conduct of surveillance and performance check of automatic control for generator distribution systems, steam boilers, oil purifier, refrigeration system, pumping and piping systems, and cargo-handling equipment and deck machinery to maintain safe operating conditions. 19. Check the operating limits of marine steam turbine propulsion plant during start up and warm up period in accordance with technical specification and agreed work plan. 20. Analyze the result from the		

						12. Supervise the checking of the condition of the main diesel engine if within the operating limits in a given scenario. 13. Conduct surveillance in checking the efficient operation of main diesel engine and auxiliary machinery in accordance with technical specifications in a given scenario. 14. Assess the performance of main diesel engine and auxiliary machinery in accordance with technical specifications in a given scenario.	checked parameters and take appropriate actions. 21. Conduct surveillance and performance assessment using the gathered data. 22. Analyze the result of surveillance and performance assessment conducted and take appropriate actions in accordance with technical specifications and agreed work plan.		
Course Introduction	1				***Assessment Criteria***				
1. Design features, and operative mechanism of marine diesel engine, marine steam turbine, marine gas turbine, and marine steam boiler	2	Multiple Choice Questions	Written Exam must be taken before the practical assessment and administered at the end of training period	Obtain at least 75% mark from written test	The planning and preparation of operations is suited to the design parameters of the power installation and to the requirements of the voyage	• The methods of preparing for the start-up and of making available fuels, lubricants, cooling water and air are the most appropriate • Checks of pressures, temperatures and revolutions during the start-up and warm-up period are in accordance with technical specifications and agreed work plans	Fuel and ballast operations meet operational requirements and are carried out so as to prevent pollution of the marine environment	Performance of required tasks based on Assessment Criteria using a Checklist
2. Planning the start-up and shut down of main and auxiliary machinery, including associated system	8							
3. Planning of efficient operation and performance assessment of propulsion	3							

plant and auxiliary machinery						• Surveillance of main propulsion plant and auxiliary systems is sufficient to maintain safe operating conditions • The methods of preparing the shutdown and of supervising the cooling down of the engine are the most appropriate • The methods of measuring the load capacity of the engines are in accordance with technical specifications • Performance is checked against bridge orders • Performance levels are in accordance with technical specifications		
4. Start up and shut down main propulsion and auxiliary machinery, including associated systems	13							
5. Operating Limits of Propulsion Plant	2							
6. The efficient operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery	9							
7. Functions and Mechanism of Automatic Control for Main Engine	3							
8. Functions and Mechanism of Automatic Control for Auxiliary Machinery	3							
9. Marine Steam Turbine	4							
10. Operation and maintenance of machinery, including pumps and piping system	2							
Total Number of Items	**50**							

Note: *The MTI has the prerogative to cluster related tasks into one scenario provided that it addresses all expected learning outcomes in the achievement of the competence and can be assessed in accordance with the specified assessment criteria.*