Exercise Plan Template
(Trainee's Copy)

Course Title	Management Level Course for Marine Deck Officers (Function 2)
Exercise No.	Exercise Sheet No. A5.1
Exercise Title	Creating a plan for safe loading/unloading cargo
Duration	120 minutes (2 hours) (30 minutes briefing, 75 minutes exercise scenario, and 15 minutes debriefing)
Function	Cargo handling and stowage at the management level
Competence	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes
Knowledge, Understanding and proficiency	Ability to use all available shipboard data related to loading, care and unloading of bulk cargoes
Intended Learning Outcome/s	At the end of the exercises, the trainee should be able to create a plan for safe loading/unloading cargo and ballasting/de-ballasting operations using stability and trim diagrams and stress-calculating equipment, stowage, and legislative requirements through a given scenario.
Training Equipment/ Materials	• Exercise Sheet A5.1 • Desktop/Laptop Cargo Handling Simulator (Loading Computer)
Scenario Description	Vessel is going to load 70,000 m/t of soda ash in bulk cargo with SF: 40.64 ft3/lt (10% moloo) in the port of Yokohama, Japan bound for Mumbai, India. Trainees must calculate; a) Initial ballast condition b) Final dep. cond. due regards to port draft limit, which is 17.0 m. Vessel has to maximize loading and distribute cargo in all the 7 cargo hold compartments. Cargo Loading Rate: 3000 mt/hr Ballast pump capacity: Pump 1=1000m3/hr ; Pump 2=1000m3/hr Cargo operation to be completed and set to depart in 24 hours. Candidate must conform with the Performance Standards
Ships Particular	M/V PEPETONE Type of ship: Bulk Carrier Call Sign: 3FXF3 Class: Nippon KaijiKyokai (NK) LOA: 225.0 m LBP: 216.0 m –(Sumitomo Type 1 vsl) Breadth Moulded: 31.80 m Depth Moulded: 13.87 m Minimum GM: 1.0 (Company Standard) Maximum List: 2 (degrees) Max. Trim (Departure): 0.50 m Max. SF: 85% Max. BM: 85% Min. propeller immerion (%) : 60%
Initial Condition	Displacement: **32952.7 mt** Draft: **Fwd/5.385m, Aft/6.313 m; Density**: **1.015** Trim: **0.928m by stern;** Heel: **0 degrees** GM: **7.125 m** FO: **2,010.3 mt** DO: **59.3 mt** FW: **296 mt** Ballast: **20933.1 mt** Cargo onboard: **nil**
Final Condition	Displacement: **82019.6 mt** Draft: **Fwd/13.497m, Aft/13.867 m;** Density: **1.015**

	Trim: **0.37m by stern;** Heel: **0 degrees** GM: **3.257 m** FO: **2,010.3 mt** DO: **59.3 mt** FW: **296 mt** Ballast: **nil** Cargo onboard: **70,000 m/t**
Exercise Procedure	
Trainee's Action	• Plans the loading of cargo to ensure that maximum allowable stress limits are not exceeded; • Plans the loading and consumption of deadweight items to determine the minimum departure freeboard to ensure that the vessel is not overloaded at any stage of the voyage through multiple and seasonal zones; and • Plans loading operations within acceptable stress parameters.

Date

Trainee's Name & Signature

Instructor's Name & Signature

Note: This sample practical Exercise Sheet was used during the conduct of pilot testing. MTI may enhance this taking into account the Resources they have.