8. *Ship stability*[2]*, construction and damage control*

(a) Understanding fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve safe trim and stability.

(b) Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and counter measures to be taken.

(c) Demonstrate use of stability, trim and stress tables, diagrams and stress calculating equipment, including knowledge of loading cargoes and ballasting in order to keep hull stresses within acceptable limits.

(d) General knowledge of the principal structural members of a ship and the proper names of the various parts.

(e) Knowledge of IMCO recommendations concerning ship stability.

9. *Ship power plants*

(a) Operating principles of marine power plants.

(b) Ships' auxiliary machinery.

(c) General knowledge of marine engineering terms.

10. *Cargo handling and stowage*

(a) The stowage and securing of cargoes on board ships, including cargo gear.

(b) Loading and discharging operations, with special regard to loading and discharging of heavy weights.

(c) International regulations and recommendations relating to the carriage of cargoes, in particular the International Maritime Dangerous Goods Code (IMDG).

(d) Carriage of dangerous goods; precautions to be taken during loading and discharging operations and the care of dangerous goods during a voyage.

(e) Working knowledge of contents and application of current relevant tanker safety guides.

(f) Working knowledge of commonly used cargo piping and pumping arrangements.

(g) Terms and definitions used to describe properties of common oil cargoes, such as crude oil, middle distillates, naphtha.

(h) Pollution regulations; ballasting, tank cleaning and gas freeing operations.

(i) Load-on-top procedures.

11. *Fire prevention and fire-fighting appliances*

(a) Organization of fire drills.

(b) Classes and chemistry of fire.

[2] Masters and chief mates serving on small ships shall be fully acquainted with the basic stability requirements of such ships.