

SHIP OPERATIONS AND MANAGEMENT – SYLLABUS

SHIP OWNERS, OPERATORS AND MANAGERS

Thoroughly understand the key functions in ship management and the responsibilities in each area that is, commercial, operational, technical, crewing, bunkers, finance and administration.

Understand the different types of organisation structure from all functions in-house, part contracted or fully contracted out.

Thoroughly understand the structure and essential components of a ship management contract. Be aware of standard documents including BIMCO SHIPMAN.

SHIP TYPES

Thoroughly understand the basics of ship design and construction and the suitability of specific ship types for different cargoes and trades.

Understand the following ship types, being able to produce simple sketches and their main dimensions and descriptions:-

Dry Trades: Liner Trades – conventional tweendecker, multi-purpose vessel, containership, ro-ro cargo, barge carriers

Tramp Trades – conventional bulk vessel (handysize, Panamax, Capesize) ore carriers, combination carriers (ore/oil, ore/bulk/oil), refrigerated ships

Wet Trades: crude (ULCC, VLCC, Suezmax, Aframax) product carrier, chemical carrier, gas carriers, specialist vessels.

Understand the functions and operational methods of different types of ship-borne cargo-handling gear and specialist cargo-handling vessels.

Thoroughly understand the terminology of all measurements and dimensions including:

Displacement

Teu

DWCC

LOA

DWAT

LBP

GT

Moulded depth

NT

Draught

Bale and grain cube

Air draught

Lane metres

Understand the contents of, and information available from, capacity plans, general arrangement plans, deadweight scales and stowage plans.

CARGOES

Thoroughly understand the characteristics of the major world cargoes and their importance in shipping markets:

- Ores
- Oil (crude and product)
- Grain
- Steel
- Coal
- Containerised cargo
- Fertilisers (including phosphate)

Understand the importance of stowage factors, cargo stability and compatibility.

Be aware of the demand for cleanliness, segregation etc.

Thoroughly understand the purpose of the IMDG code and the basic headings under which dangerous cargo is carried and stowage.

Understand the importance of cargo outturn and be aware of outturn reports, tallying, sampling and the role of damage surveys in settling damage claims.

REGISTRATION, CLASSIFICATION, PORT STATE CONTROL, ISM CODE

Thoroughly understand the reasons for, and choice of, nationality of vessel, national flag, open registry and international registries (including 'flags of convenience').

Understand the impact of the choice of flag on operational and administrative costs (including taxation).

Thoroughly understand the role and function of classification societies and understand classification societies' register entries.

Understand the importance of class maintenance programmes and class surveys.

Be aware of the difference between annual, intermediate, special surveys and damage surveys.

Thoroughly understand the requirements for international safety convention certification including Safety of Life at Sea (SOLAS) and loadline certification and appropriate surveys.

Thoroughly understand the basic requirements of the International Safety Management (ISM) code, its application and audit requirements.

Thoroughly understand the requirements of 'commercial' surveys including on-/off-hire, pre-loading, draught and bunkers.

Understand the importance of safety management including risk management. Be aware of the requirements for safe working practices, training and drills.

Understand the importance of environmental protection and the impact of pollution liability including the requirements of MARPOL (annexes, oil record books, garbage, ballast, smoke and noise). Be aware of environmental rules including US OPA and the role of shore-based organisations in notification and contingency plans.

COSTS

Thoroughly understand the difference between fixed costs, daily operating costs and voyage related costs:

Fixed costs – return on capital, amortisation, debt servicing.

Daily operating costs – crew expenses, victualling, stores, lubricants, insurance, P&I calls (including reserve for deductible), repair/ maintenance, drydocking, communication.

Voyage-related costs – bunkers, port costs (including tugs, pilots, agency fees), canal dues, loading/discharging costs.

Understand the importance of preparing and monitoring budgets and the presentation of financial results.

ACCOUNTING

Thoroughly understand the critical importance of freight/hire collection and taking action where appropriate.

Understand port disbursements and the role of port agents, including estimated disbursement accounts and advance funds.

Understand the calculation and settlement of demurrage and despatch claims.

Understand the necessity to monitor dealings with contractors and subcontractors including tugs, pilots, stevedores, terminal operators, riggers, hold/tank cleaners, slop disposal services, dry-docks, engine builders, lubricant and bunker supplies, repairers, ship chandlers etc.

CREWING

Thoroughly understand crew management as a key component of efficiency and operating costs including the role of the master.

Understand the essential elements of crew costs; basic wages, overtime, allowances, leave, social costs. Understand the relationship between flag crew nationality, manning levels and the recruitment of officers and ratings.

Understand the advantages and disadvantages of using crewing agencies.

Understand Standards of Training, Certification and Watchkeeping (STCW) regulations. Be aware of International Labour Organization (ILO), International Transport Workers' Federation (ITF) regulations and understand their potential intervention on non-national flagged vessels.

MARINE INSURANCE

Thoroughly understand the difference between Hull and Machinery Insurance and P&I cover.

Understand: Hull and Machinery, markets and placements, Institute warranties, Institute Time Clauses, Additional cover (war risk, ice etc), Total Loss, Constructive Total Loss (CTL).

P&I – The constitution and cover provided by mutual associations. The concept of calls and supplementary calls. Cover for crew claims, contractual claims, claims for negligence, third-party risks, strike insurance, pollution insurance.

Thoroughly understand the concept of general average and understand when and why to declare it.

Be aware of the the role and function of average adjusters.

Understand conventions limiting liability in respect of the vessel and cargo.

Understand the concept of salvage and Lloyd's Open Form (LOF) agreements.

Be aware of salvage arbitrations.

Understand the proper handling of cargo claims, repudiations, surveys and contractual exceptions.

VESSEL OPERATIONS

Thoroughly understand the interactive roles of the commercial operations department and technical department.

Thoroughly understand the importance of complete and accurate voyage instructions.

Understand the monitoring of the loading and discharging programmes and the importance of associated documents; Notice of Readiness, Statement of Facts, timesheets etc.

Understand the importance of vessel compliance with contract including speed and performance issues.

Understand the relevance of accurate and prompt attention to other contractual requirements.

Understand the importance of repair, maintenance, storing and drydocking programmes and the ability to respond to short-term situations and incidents.

Understand the importance of vessel routing taking into consideration geography, meteorology, loadline zones, canals and waterways.

BUNKER MANAGEMENT

Understand the types of fuel used for bunkers and their characteristics, and understand the importance of quality and quantity measurements, sampling and testing.

Understand the precautions necessary to avoid environmental problems.

Be aware of the key players in the bunker market.

Understand bunker contracts and the use of standard forms, for example, FuelCon

Know the location of main bunker ports.

VOYAGE ESTIMATING

Thoroughly understand the importance of voyage estimating and its role in ship operating.

Understand the mechanics of a voyage estimate including daily operating costs and route calculation.

Understand the effect of loadline and stability issues on maximising cargo lift.

Understand the importance of planning the bunker ports related to both bunker cost and cargo maximisation.

Candidates will be expected to draft simple voyage estimates from data supplied including comparisons with different employment, alternative routes and voyage versus time charter.

LAW RELATING TO SHIP MANAGEMENT

Thoroughly understand the legal relationship between the shipowner and the independent ship manager and the relationship between independent ship managers to cargo interests and third parties.

Understand the shipmanager's role in handling cargo claims. Understand the effect of arrest *in rem*, freezing orders and late hire payment.

Understand the shipowner's responsibility for cargo carried by time charter.

Note: No exemption is permitted from this subject.