Human element knowledge & skills framework - operations

Ship Operators/Master/Senior Officers

Be fully conversant with and fully understand the need to implement:

- pertinent IMO, ILO, WHO and other regional instruments relevant to maritime safety and protection of the marine environment
- international codes, guidelines and standards in the context of SOLAS 1974 (as amended), STCW 1978 (as amended), the International Regulations for Preventing Collisions at Sea, 1972 (as amended), IHR 2005, and MARPOL 74/78 (as amended)
- the provisions of the ILO Maritime Labour convention 2006 (MLC, 2006)
- other regional instruments relevant to maritime safety and protection of the marine environment
- Company regulations relevant to the safe conduct of the ship, the safe and timely delivery of its cargo and the health, safety and wellbeing of the crew
- measures to prevent/suppress terrorism against ships and to improve security aboard and ashore, in accordance with the ISPS Code
- IMO Guidelines for Engine-Room Layout, Design and Arrangement (MSC/Circ.834), as appropriate

Ship Operators

Fully understand the need to:

- promote and manage human element activities to reflect the needs of safe and effective operation, and provide the necessary resources
- facilitate information feedback, exchange and other communication about human element issues, including the provision of human element data in standard formats
- establish a focus on human element issues (including usability, health and safety) in those aspects of shipping operations that deal with the business strategy (current and future), markets, options for future operations and planning their concept
- effectively involve and consult crew and support staff on each significant aspect of the ship and its systems in order to improve its usability, health and safety, or performance
- include human element issues in decision making, trade-off and risk management studies, in order to mitigate the risk to safe and effective ship and company operation
- take account of the human element in the acquisition, supply and operation of systems and the management of services
- ensure that human element issues arising from the operation, support and maintenance of the ship and its systems are given sufficient
- ensure that the human element is given sufficient attention throughout the introduction and validation of a new operation
- ensure that modifications to the ship and its equipment take account of human element issues identified in service, and that the human element is managed during major work originating from the company office.
- achieve safe and effective operation in the most timely and costeffective manner by provision of the correct number of competent crew and support staff
- operate an HR strategy based on the company business objectives that includes a mechanism for recording and implementing lessons learnt
- identify the changes to existing staffing and personnel resources and skill demands imposed by planned operations and predict staff availability over planned future developments
- deliver individual and collective training solutions reconciled to the requirements of safe and effective ship operations
- provide data on ship operations in order to improve staffing provision and deployment, ship and system design, and operational deployment
- check usability of a system, by selecting and applying appropriate practices that use human element data
- establish, clarify and communicate the characteristics of the users,

their tasks and the technical, organisational and physical environment in a system will operate

- establish, clarify and communicate the requirements of the users of a system
- ensure that the design options for any product system of work take account of the human element
- ensure that feedback on the evaluation of the aspects of a system related to its use or users is collected and reported

Recognise:

- the importance of safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment and to property, in accordance with the requirements of the ISM Code
- the Master's responsibility with regard to: implementing the safety and environmental-protection policy of the Company; motivating the crew in the observation of that policy; issuing appropriate orders and instructions in a clear and simple manner; verifying that specified requirements are observed; and reviewing the safety management system and reporting its deficiencies to the shore-based management
- that the master has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary

Master

Recognise:

- the importance of properly addressing the human element for safety of life at sea, safety of navigation and protection of the marine environment and property
- the importance of safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment and to property, in accordance with the requirements of the ISM Code
- his/her responsibilities with regard to implementing the SMS; motivating the crew in the observation of that policy; issuing appropriate orders and instructions in a clear and simple manner; verifying that specified requirements are observed; and reviewing the safety management system and reporting its deficiencies to shorebased management
- that he/she has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary

Ensure that:

- his/her ship is manned with qualified, certificated and medically fit seafarers in accordance with national and international requirements
- new crew members are given proper familiarization with their duties
- instructions, which are essential to be provided prior to sailing are identified, documented and given
- appropriate training is provided for all crew members
- relevant information is provided in (a) language(s) understood by crew members
- crew members are able to communicate effectively
- plans and instructions for key shipboard operations are available; tasks involved are defined and assigned to qualified crew members
- procedures are in place to identify, describe and respond to potential emergency shipboard situations
- programmes are established for drills and exercises to prepare for emergency actions
- the ship can respond at any time to hazards, accidents and emergency situations
- non-conformities, accidents and hazardous situations are investigated and reported to the Company; timely corrective action is taken
- all documents and data relevant to the SMS are properly controlled
- valid documents are available on board; changes to documents are reviewed and approved by authorized personnel; obsolete documents are promptly removed

- the SMM is kept in a form that the Company considers most effective; all documentation relevant to that ship is carried on board
- the results of audits and reviews are brought to the attention of crew members; timely corrective action is taken on deficiencies
- crew are effectively involved and consulted on each significant aspect of the ship and its systems so as to improve its usability, health and safety, or performance
- communication between the crew and other stakeholders is effective
- the crew are aware of human element issues, are involved in the feedback process and are notified of changes made to design, operation, training or manning as a result of their input
- the crew competencies required to operate and support the ship and its systems are identified and continuously reviewed over time
- ship maintenance and maintainability requirements for support are met by the ship and its systems
- the overall performance of the ships and their systems is consistent with required capability
- he/she works together with operations staff to achieve the objectives of the organisation

Senior officers

Ensure that:

- all crew members are fully conversant with the Company's SMS and it is properly implemented
- all crew members are aware of the identify and role of the DPA
- new crew members are familiar with their duties
- all crew members have an adequate understanding of relevant rules, regulations, codes and guidelines
- non-conformities, accidents and hazardous situations are reported in accordance with the SMS
- the ship is maintained in conformity with the provisions of relevant rules and regulations and Company instructions
- the results of audits and reviews are brought to the attention of crew members; timely corrective action is taken on deficiencies
- crew members are involved and consulted on each significant aspect of the ship and its systems to improve usability, health and safety or performance; crew feedback is widespread and effective
- crew members are aware of human element issues, and of the changes made as a result of their input

Bridge Team

Be fully conversant with and fully understand the need to implement:

- the provisions of the International Regulations for Preventing Collisions at Sea, 1972 (as amended)
- the appropriate provisions of MARPOL 74/78 (as amended)
- the principles of Bridge Resource Management, including the involvement of the pilot when appropriate
- procedures for responding to system failures and emergency situations

Engineering Team

Be fully conversant with and fully understand the need to implement:

- the appropriate provisions of MARPOL 74/78 (as amended)
- the principles of Engineroom Resource Management
- procedures for responding to system failures and emergency situations
- IMO Guidelines for Engine-Room Layout, Design and Arrangement (MSC/Circ.834), as appropriate

