Integrated management systems Ship operating companies

Safety, Quality, Environment and Occupational Health and Safety

DNV Maritime

MANAGING RISK **DNV**

Preamble

Organisations of all kinds are increasingly concerned about achieving and demonstrating sound safety, environmental, occupational health and quality performance. The ISM Code focuses on the safe management and operation of ships and pollution prevention. ISO 14001 provides the elements of an effective environmental management system. The ISO 9001 series is designed to ensure that customer requirements for quality are met. OHSAS 18001 gives requirements for an occupational health and safety (OH&S) management system, to enable an organisation to control its OH&S risks and improve its performance. These three standards together with the ISM Code are complementary in nature and may be integrated in one management system.

The intention of this guideline is to assist DNV personnel in the interpretation of the requirements of ISO 9001, ISO 14001 and OHSAS 18001 when applied to a marine management and ship operation that complies with the ISM Code.

The guidance can also be useful to companies planning to implement the ISM Code, ISO 9001 and ISO 14001, in knowing the common elements and differences between the ISM Code and the ISO standards.

Companies aiming for ISO 9001 certification should be aware of their differing customers; owners will have charterers as their customers to whom they will supply the ship to carry cargo and/or passengers. Ship management companies have owners as their principal customers, even though they are operating the ship to carry cargo and/or passengers. The charterers and/or passengers are secondary customers. This should be borne in mind when formalising the quality related aspects of the company's management system.

A key issue in ISO 14001 is the need to assess all environmental aspects related to the company's activities, products and services. The significant environmental aspects should then be identified and managed. A key issue in OHSAS 18001 is the need to identify all occupational health and safety hazards for personnel related to the company's activities and facilities and do an assessment of risks. The result of these assessments shall be used to identify the hazards which have to be eliminated or controlled.

The certification process including the follow-up audits will be carried out by qualified lead auditors and auditors from DNV.

Where the ISM Code requirements are common to the three other standards, the text is printed in black, and in these cases no distinguishing points are made. The clause references that apply to the ISM Code are shown in **blue,** to ISO 9001 in *red italics,* ISO 14001 in **underlined green,** and OHSAS 18001 in **orange bold.** Where possible extra attention and additional requirements may be needed to satisfy the ISO 9001 standard, such text and references are shown in *red italics,* and for the ISO 14001 standard in **underlined green,** and for the ISM Code in **blue.**

Two sets of guidelines have been developed; one for onboard ship and one for ship operating companies.
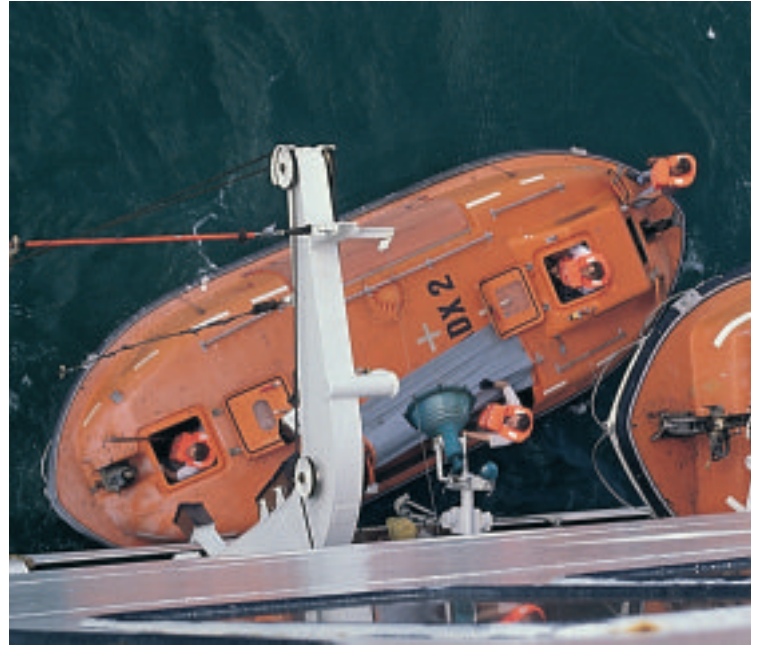
The x-matrix shows the correlation between the different requirements in ISM, ISO 9001:2000, ISO 14001:2004 and OHSAS 18001.

The layout of this guideline follows a typical structure of a shipping company, but there may be variation in company structures and this should be considered when going through this guideline.

Some of the references given in brackets are for internal use by DNV personnel. IS means "Instruction to Surveyors".

The overall scope and objectives of the code and standards have to be the dominant element in developing and implementing management systems.

This guideline is not a substitute for the ISM Code, the two ISO standards and the OHSAS standard. To fully implement the ISM Code and the three standards the contents of the relevant code and standard must be studied.

Assessment and Certification Process
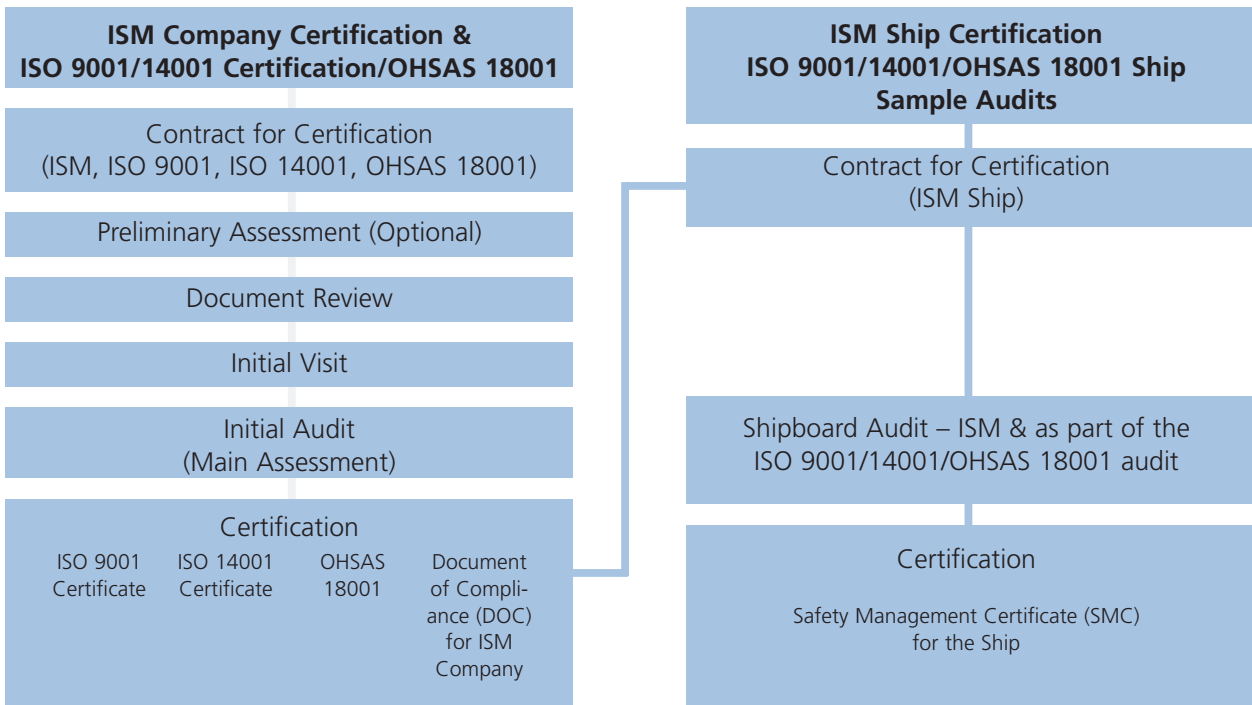
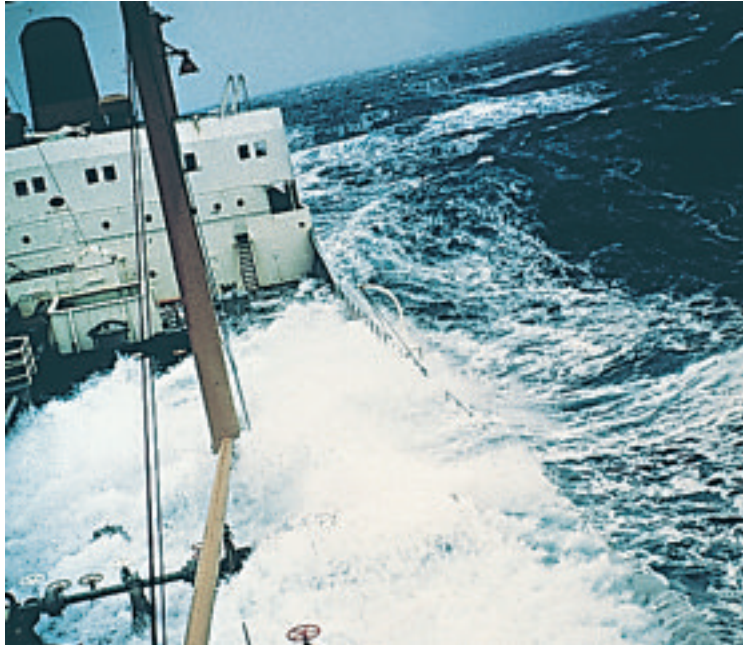| ISM Company Certification & ISO 9001/14001 Certification/OHSAS 18001				ISM Ship Certification ISO 9001/14001/OHSAS 18001 Ship Sample Audits
Contract for Certification (ISM, ISO 9001, ISO 14001, OHSAS 18001)				Contract for Certification (ISM Ship)
Preliminary Assessment (Optional)				
Document Review				
Initial Visit				
Initial Audit (Main Assessment)				Shipboard Audit – ISM & as part of the ISO 9001/14001/OHSAS 18001 audit
Certification				Certification
ISO 9001 Certificate	ISO 14001 Certificate	OHSAS 18001	Document of Compliance (DOC) for ISM Company	Safety Management Certificate (SMC) for the Ship

Executive management

Objectives and policies

Many aspects of the requirements to policy and objectives are the same in the code and the standards. The top management shall define policy relevant to the nature of business and as a framework for objectives and targets. **(Ref. 1.2; 1.4.1; 2.1; 2.2)** *(Ref. 5.3; 5.4)* **(Ref. 4.2; 4.3.3; 4.4.3)** **(Ref. 4.2; 4.3.3; 4.4.3)**

System management

Instructions and procedures to operate ships safely, whilst protecting the environment, control its OH&S risks and being in compliance with relevant international and Flag State legislation are required. Defined levels of authority, responsibility, lines of communication, resources and support, plans for key shipboard operational procedures, accidents and non-conformity reporting procedures, emergency procedures, internal audits and management reviews are all requirements. (Ref. ISM Code and ISO standards.)

The ISM Code requires designated person(s) to be appointed. **(Ref. 4)**

In addition, the management system will need to identify a quality management representative(s) and describe elements in the ISO 9001 standard not already addressed in the existing safety management system. (See the ISO 9001 references in this guidance.) The customer should be defined and a system for measuring and monitoring the service provided to satisfy the customer's needs has to be put in place. *(Ref. 4.2; 5.5.3; 8.2.1)*

In addition, the management system clause requires top management to appoint an environmental management representative and provide resources to manage and control the environmental system. All environmental aspects shall be assessed, by considering normal and abnormal operations and potential emergency conditions. The significant aspects shall then be identified and managed. Procedures for receiving, documenting and responding to communication from external interested parties shall be established. The organisation shall also consider processes for external communication on its significant environmental aspects and record its decisions. **(Ref. 4.3.1; 4.4.1; 4.4.3)**

Same as for ISO 14001, but related to occupational health and safety systems. All occupational health and safety hazards must be identified, and assessments of risks must be done. **(Ref. 4.3.1; 4.4.1; 4.4.3)**

Executive management

Objectives and policies

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2	4.2	5.1	4.2	The policy and objectives should reflect the
1.4.1	4.2	5.3	4.2	intention of the each of the standards.
2.1	4.3.3	5.4.1	4.3.3	Safety and environmental policy.
2.2	4.4.3		4.4.3	Objectives and targets of each relevant function and level.
				Objectives and targets at each relevant function and level. Internal communication.
				Objectives and targets at each relevant function and level. Internal communication.

System management

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.4.3	4.1	5.1	4.1	Organisational responsibilities. Authority. Internal
1.4.6	4.3.4	5.3	4.3.3	audits. Management (Master's) review. Communication
3.2	4.4.1	5.4.1	4.4.1	lines. System performance parameters. Reporting
3.3	4.4.3	5.5.2	4.4.3	system. Resources and support. Control of
12.1	4.4.4	5.5.3	4.4.4	documents. Continual improvement.
12.2	4.4.5	5.6	4.4.5	Designated person(s).
4	4.5.4	6.1	4.5.5	Quality management representative. Customer needs
	4.6	6.2.1	4.6	and satisfaction.
	4.3.1	4.2	4.3.1	Significant environmental aspects. Environmental
	4.4.1	5.5.3	4.4.1	management representative. Communication –
	4.4.3	8.2.1	4.4.3	external interested parties.
				Occupational health and safety risks where control measures need to be applied. OH&S management representative. Communication – external, internal parties.

Ship operational capabilities and continual improvement

Objectives to continually improve safety management skills ashore and on board by analysis of non-conformities, accidents and hazardous situations need to be met. Procedures to maintain the company's ships are required. **(Ref. 1.2.2.3; 9; 10.1)** *(Ref. 8.5.2)* (Ref. 4.5.1; 4.5.2; 4.5.3) **(Ref. 4.5.1; 4.5.2)**

Customer needs, expectations and requirements have to be taken into account. A procedure for analysis of data to improve the quality effectiveness of the management system is required. Procedures for eliminating the causes for potential non-conformities and prevent occurrence are also required. *(Ref. 5.2; 8.4; 8.5.3)*

The company shall establish an environmental management programme that addresses all of its objectives and targets, including schedules, resources and responsibilities for achieving them. The environmental programme helps the company to improve its environmental performance and meet its commitment to continual improvement. (Ref. 4.3.3)

The company shall establish an OH&S programme that addresses all of its objectives and targets, including schedules, resources and responsibilities for achieving them. **(Ref. 4.3.4)**

Mandatory requirements, laws and regulations

The company's management system should comply with all mandatory requirements and take into account all applicable codes, guidelines and standards. **(Ref. 1.2.3; 1.4.2; 3.1)** *(Ref. 7.2.1c)* (Ref. 4.3.2) **(Ref. 4.3.2)**

Human resources/personnel

The company should ensure that seafarers are qualified, certified and **medically fit.** **(Ref. 6.2)** *(Ref. 6.2.1; 6.2.2)* (Ref. 4.4.2) **(Ref. 4.4.2)**

The organisation shall assign personnel (ashore as well as on board) to ensure that those who have defined responsibilities are competent. Evaluate effectiveness of training. *(Ref. 6.2.1)*

All employees shall be aware of their roles and responsibilities, the significant environmental impact of their work etc. (Ref. 4.4.2)

All employees shall be aware of their roles and responsibilities, the OH&S consequences, actual or potential, of their work activities etc. **(Ref. 4.4.2)**

Safety of ship and pollution prevention

The company shall appoint a designated person(s) ashore. The Master's overriding authority on board the ship must be defined. Procedures for the preparation of plans and instructions for key shipboard operations concerning the safety of the ship, the prevention of pollution and the control of OH&S risks. **(Ref. 4; 5.2; 7)**

No specific requirement.

Procedures are required for key shipboard operations concerning prevention of pollution and significant environmental impact. (Ref. 4.4.6)

Plans and procedures shall reflect the identified risks related to OH&S onboard where control measures need to be applied. **(Ref. 4.4.6)**

Ship operational capabilities and continual improvement

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2.2.3	4.5.1	8.5.2	4.5.1	Monitoring, actions.
9	4.5.2	*5.2*	4.3.3	Eliminating potential non-conformities.
10.1	**4.3.4**	*8.4*		***Customers need, preventive action.***
		8.5.3		**Environmental management program.**
				OH&S management program.

Mandatory requirements, laws and regulations

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2.3	4.3.2	7.2.1.c	4.3.2	Compliance with rules and regulations.
1.4.2	**4.2.C**		**4.2.C**	
3.1				

Human resources/personnel

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
6.2	4.4.2	6.2.1	4.4.2	Identify training needs.
6.2	**4.4.2**	6.2.2	**4.4.2**	Perform training.
		6.2.1		Ensure relevant training for each of the three standards.
				Medically fit.
				Evaluate effectiveness of training.
				Awareness training.
				Occupational health and safety awareness training.

Safety of ship and pollution prevention

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
4	4.4.6	–	**4.4.6**	**Designated person(s) as safety valve.**
5.2	**4.3.1**		**4.3.1**	**Overriding authority.**
7				**Risk identification.**
				Risk identification.
				Risk identification.

Emergency contingency

The company should establish procedures to deal with potential emergency shipboard situations including drills and exercises. **(Ref. 8.2; 8.3)**

No specific requirement.

The organisation shall establish procedures to identify the potential for and response to accidents and emergency situations, and for preventing and mitigating the environmental impacts that may be associated with them. **(Ref. 4.4.7)**

The organisation shall establish procedures to identify the potential for, and responses to, incidents and emergency situations, and for preventing and mitigating the likely illness and injury that may be associated with them. **(Ref. 4.4.7)**

Infrastructure

No specific ISM requirement.

The company shall define, provide and monitor the infrastructure needed to achieve the conformity of its service.

(Ref. 6.3)

No specific environmental requirements.

No specific OH&S requirements.

Technical and operational ship support

Ship maintenance system

Maintenance procedures covering at least all items subject to class, statutory and additional company requirements are required. **(Ref. 10)** *(Ref. 7.5.1)* **(Ref. 4.4.6)** **(Ref. 4.4.6)**

Planning and control of appropriate procedures are required as are purchasing procedures. **(Ref. 7.4; 7.5.1)**

Onboard verification and inspections

Regular onboard verifications and inspections are required. **(Ref. 10.2.1)**

This is part of the main organisation's service realisation for operating under controlled conditions. **(Ref. 7.1)**

No specific environmental requirement.

No specific OH&S requirement.

Emergency contingency

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
8.2	4.4.7	–	4.4.7	Organisational response.
8.3				Plans and drills.
				Procedures for preventing environmental impact.
				Review and revise emergency response procedures based on lessons learned.

Infrastructure

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	–	6.3	–	*IT PLATFORM: Network/OS/Hardware/ Software communication systems/Backup systems.*

Technical and operational ship support

Ship maintenance system

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
10	4.4.6	7.5.1	4.4.6	Identify critical (S, Q&E) equipment. Set inspection intervals. Maintain records. Report and follow up N.C. Regular testing. Additional company requirement.
	4.5.1	7.4	4.5.1	*Major subcontractors (see approval of suppliers). Monitoring & measurement equip.*

Onboard verification and inspections

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements
10.2.1	–	7.1	–	Superintendent Inspection. *Controlled service conditions.*

Ship repair/dry-docking

The company is required to maintain ship in conformity with rules and regulations. **(Ref. 10)**
Procedures for ship repair/dry-docking need to be planned activities with set objectives. Any shipboard modifications need design and development approval. Purchasing procedures for selecting repairers will be needed.
(Ref. 5.5; 7.3; 7.4; 7.5)
The organisation shall identify the significant environmental aspects of goods and services used and communicate relevant procedures and requirements to suppliers and contractors. Requirements could for example be related to waste management, bottom cleaning, use of chemicals and paints etc. **(Ref. 4.3.1; 4.4.6)**
The organisation shall identify the OH&S risks of goods, equipment and services purchased and/or used by the organisation and communicate procedures and requirements to suppliers and contractors.
(Ref. 4.3.1; 4.4.6)

Mandatory regulations, certificates and class

Understand and comply with all legal requirements, standards and codes.
(Ref. 1.2.3; 6.4; 10.1) *(Ref. 5.3; 7.2.1.c)* (Ref. 4.3.2) **(Ref. 4.3.2)**

Assistance and communication to ship in day to day/long term operation

Define communications between shore and shipboard personnel.
(Ref. 1.4.3; 4) *(Ref. 5.5.3)* (Ref. 4.4.3) **(Ref. 4.4.3)**
Designated person(s) ashore accesses to top management. **(Ref. 4)**

Performance monitoring

Effective procedures for reporting non-conformities and hazardous situations required. Data analysis, implementation of preventive actions and continual improvement procedures are required.
(Ref. 6.7; 9; 10.2) *(Ref. 5.5.3; 8.2.3; 8.3; 8.4; 8.5)* (Ref. 4.5.1; 4.5.3) **(Ref. 4.5.1; 4.5.2)**
Designated person(s) ashore to monitor safety and pollution prevention aspects. **(Ref. 4)**
Procedures for measuring and monitoring operational performance are required. Procedures for analysis of data for improvement of system effectiveness need to be established, as well as for continual improvement.
(Ref. 8.3; 8.4; 8.5)
Procedures for regular monitoring and measuring key operations and activities with significant environmental impacts are required. Evaluating compliance with relevant environmental legislation and regulations is also required. (Ref. 4.5.2)
Procedures for monitoring and measuring OH&S performance on a regular basis. Evaluating compliance with relevant OH&S legislation and regulations is also required. **(Ref. 4.5.1)**

Budget control/cost control

Adequate safety costs to be included in the budget. **(Ref. 3.3)**
No specific requirement.
The financial consequences of the environmental objectives and targets shall be considered. (Ref. 4.3.3)
The financial consequences of the OH&S objectives and targets shall be considered. **(Ref. 4.3.3)**

Ship repair/dry docking

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
10	4.3.1	7.3	4.3.1	Planning (Safety aspects).
	4.4.6	7.4	4.4.6	Prepare specification.
		7.5		Select subcontractor and yard (see appr. suppliers).
				Monitoring during stay. Communication with supplier/subcontractor/class/Flag State.
				Identify significant environmental aspects related to goods and services.
				Communicate requirements to suppliers.
				Identify hazards and assess the risks related to goods and services. Communicate requirements to suppliers.

Mandatory regulations, certificates and class

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2.3	4.3.2	5.3	4.3.2	Identify and update.
6.4		7.2.1.c		Procedure to ensure compliance.
10.1				Supply information to ships and owners in understandable wording.

Assistance and communication to ship in day to day/long term operation

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.4.3	4.4.3	5.5.3	4.4.3	Reporting of performance from ships.
4				Internal communication.
				Designated person(s).

Performance monitoring

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
6.7	4.5.1	5.5.3	4.5.1	Identify reporting requirements.
9	4.5.2	8.2.3	4.5.2	Analyse and give feedback of reports from ships.
10.2	4.5.1	8.4	4.5.3	Supply ships with relevant information (Experience
4		8.5	4.5.1	transfer).
		8.3		Handling of N.C.
		8.4		Analysis of N.C and corrective actions.
		8.5		Implementation of preventive actions and continual improvement.
				Monitoring of ships safety and pollution aspects.
				Measuring operational performance of service plus effectiveness and improvement.
				Measure environmental performance.
				Measure OH&S performance.

Budget control/cost control

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
3.3	4.3.3	–	4.3.3	Monitoring costs (safety costs only).
				Budget to meet environmental objectives and targets.
				Budget to meet O&HS objectives and targets.

Marine operational procedures

The company must have plans and instructions for key shipboard operations concerning ship safety, pollution prevention and control of OH&S risks. This should include voyage planning, cargo handling procedures, watch-keeping requirements, rest periods and emergency preparedness etc. Monitoring of working and rest hours to be done. *(Ref. 6.2; 7; 8)*

Quality objectives for the organisation's shore based procedures are to achieve the requirements of the company's customers. *(Ref. 5.5; 7.1; 7.2; 7.5)*

The organisation must establish documented procedures to cover situations where their absence could lead to deviation from the environmental policy, objectives and targets. This could include waste management, handling ballast water, energy saving, engine running (speed adjustment and route planning) etc. Procedures should include operating criteria. *(Ref. 4.3.1; 4.4.6; 4.4.7; 4.5.1)*

The organisation must establish documented procedures to cover situations where their absence could lead to deviation from the OH&S policy, objectives and targets. *(Ref. 4.3.1; 4.4.6; 4.4.7; 4.5.1)*

Cargo claims

No specific ISM requirement.

Systems for reducing or eliminating the causes of cargo claims (non-conformities) need to be established. *(Ref. 8.5.2)*

Procedure for handling of non-conformance + corrective action. *(Ref. 4.5.3)*

Procedure for handling of non-conformance + corrective action. *(Ref. 4.5.3)*

System functions

Procedure establishment/approval

Instructions and procedures to be approved and documented.

(Ref. 1.4; 11)   *(Ref. 4.2; 5.5)*   *(Ref. 4.4.4; 4.4.5)*   *(Ref. 4.4.4; 4.4.5)*

System familiarisation

Familiarisation of the management system instructions and procedures, training and effective communications is required. *(Ref. 6.3; 6.5; 6.7)*   *(Ref. 5.5.3; 6.2.2)*   *(Ref. 4.2.f; 4.4.2)*   *(Ref. 4.2.e; 4.4.2)*

Procedures covering monitoring of the effectiveness of training. *(Ref. 6.2.2)*

Environmental policy is to be communicated to all employees. Training, awareness and competence is to be identified with regard to significant environmental impacts. *(Ref. 4.2.e; 4.4.2)*

OH&S policy is to be communicated to all employees. Training, awareness and competence are to be identified with regard to the OH&S consequences, actual and potential, of their work activities. *(Ref. 4.2.e; 4.4.2)*

Marine operational procedures

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
6.2	4.3.1	5.5	4.3.1	Formal identification procedure for activities.
7	4.4.6	7.1	4.4.6	Contingency responsibilities. Supply of Cargo information
8	4.4.7	7.2	4.4.7	to ship. Safety/environmental Data Sheets (Cargo).
	4.5.1	7.5	4.5.1	Voyage planning.
				Updating and supplying mandatory rules and regulations.
				Handling information from the ship (including minutes
				of safety meetings) and giving follow-up. Monitor/review
				the performance of cargo/ship/charter. Cargo handling
				instructions/specifications. Loading/discharging
				calculations (stress stability).
				Monitoring working- and rest-hours.
				Charter Contract reviews + cargo and monitoring.
				Operational procedures in line with significant environmental aspects. Charter Contract reviews.
				Operational procedures in line with identified occupational health and safety risks where control measures need to be applied.

Cargo claims

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.5.2	8.5.2	4.5.3	*System of handling cargo claims.*
				Non Conformity handling.
				Non Conformity handling.

System functions

Procedure establishment/approval

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.4	4.4.4	4.2	4.4.4	Procedures to support and ensure proper approval.
11	4.4.5	5.5	4.4.5	Remove obsolete documentation.

System familiarisation

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
6.3	4.2.e	5.5.3	4.2.f	Procedure to support familiarisation.
6.5	4.4.2	6.2.2	4.4.2	*Training, monitoring of effectiveness.*
6.7	4.2.e	6.2.2	4.2.f	*Internal communications, competence training etc.*
	4.4.2		4.4.2	Significant environmental impact training, awareness, etc.
				OH&S impact training, awareness, etc.

Document control

All documentation and data relating to the management system are to be controlled.

<p style="text-align:center">(Ref. 11)   *(Ref. 4.2.3; 4.2.4)*   (Ref. 4.4.5)   (Ref. 4.4.5)</p>

Internal non-conformities and corrective action/ preventive action/ continual improvement

Procedures for reporting non-conformities with a view to improving safety and preventing pollution and control of OH&S risks. Procedures for eliminating the causes of potential non-conformities are required.

<p style="text-align:center">**(Ref. 9; 10.2.2; 10.2.3; 12.6)**   *(Ref. 8.3; 8.4; 8.5)*   (Ref. 4.5.3)   (Ref. 4.5.2)</p>

System efficiency

The company should verify compliance and evaluate the efficiency of the management system. Management reviews covering all of the company's systems at defined intervals, are required, including input from master.

<p style="text-align:center">**(Ref. 5.1.5; 12.1; 12.2)**   *(Ref. 5.6)*   (Ref. 4.6)   (Ref. 4.6)</p>

Measurement of management system performance including customer satisfaction is a requirement.   *(Ref. 8.2)*

The organisation shall evaluate the environmental performance and the conformance with the environmental policy, objectives and targets. Evaluating compliance with relevant environmental legislation and regulations.

(Ref. 4.6)

The organisation shall evaluate the OH&S performance and the conformance with the OH&S policy, objectives and targets. Evaluating compliance with relevant OH&S legislation and regulations.   **(Ref. 4.6)**

Internal audits

Internal audits to verify system compliance by an independent auditor are required.

<p style="text-align:center">**(Ref. 12.1)**   *(Ref. 8.2.2)*   (Ref. 4.5.5)   (Ref. 4.5.4)</p>

Internal audit is required of the management system covering areas beyond the ISM Code.   *(Ref. 8.2.2)*

The organisation's audit programme shall be based on the environmental importance of the activity concerned and the results of previous audits.   **(Ref. 4.5.5)**

The organisation's audit programme shall be based on the results of risk assessments of the organisation's activities and the results of previous audits.   **(Ref. 4.5.4)**

Records

Inspection and maintenance records shall be kept.   **(Ref. 10.2.4)**   *(Ref. 4.2.4)*   (Ref. 4.5.4)   (Ref. 4.5.3)

Documented procedures are required for identification, retention, storage, retrieval, protection of quality records.

(Ref. 4.2.4)

The organisation shall establish procedures for the identification, storage, protection, retrieval, retention and disposal of records. The records shall be legible, identifiable and traceable to the activities, products or services involved.   **(Ref. 4.5.4)**

The organisation shall establish procedures for the identification, maintenance and disposition of OH&S records, as well as the result of audits and reviews. The records shall be legible, identifiable and traceable to the activities involved.   **(Ref. 4.5.3)**

Document control

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
11	4.4.5	4.2.3	4.4.5	Establish and maintain distribution procedures
		4.2.4		for documents.
				Removal of obsolete documents.

Internal non-conformities and corrective action/preventive action/continual improvement

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
9	4.5.2	8.3	4.5.3	Records to be kept.
10.2.2		8.4		Coordinate handling of N.C.
10.2.3		8.5		Coordinate preventive action.
12.6				Improvement processes. Claims and injuries.

System efficiency

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
5.1.5	4.6	5.6	4.6	Evaluate system efficiency (from various sources).
12.1	**4.6**	*8.2*	<u>4.6</u>	Measure, monitor and analyse the system.
12.2				*Customer satisfaction investigation.*
				<u>**Measure conformance with environmental objectives and targets.**</u>
				Measure conformance with OH&S objectives and targets.

Internal audits

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
12.1	4.5.4	8.2.2	4.5.5	Coordinate plans.
	4.5.4	*8.2.2*	<u>4.5.5</u>	Records.
				Systems related to ISO 9001.
				<u>**Relevant environmental system.**</u>
				Relevant OH&S system.

Records

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
10.2.4	4.5.3	4.2.4	4.5.3	Maintenance records to be kept.
	4.5.3	*4.2.4*	<u>4.5.3</u>	Training records.
				Documented procedures for: identification, storage, retrieval, protection, retention, disposal.
				<u>**Environmental records. Procedure for identification, maintenance and disposal.**</u>
				OH&S records. Procedure for identification, maintenance and disposal.

Chartering and operation

Fleet information – operations management

No specific ISM requirement.

The company should record and control its fleet movements by means of identifying ship positions and ship particulars.

Operational controls for reporting, stevedoring, voyage/terminal planning, etc. *(Ref. 7.5)*

No specific environmental requirements.

No specific OH&S requirements.

Charter party

No specific ISM requirement.

Organisations require procedures for controlling, reviewing and communicating information on charter parties (contracts). *(Ref. 7.2)*

No specific environmental requirements.

No specific OH&S requirements.

Cargo operations

Key shipboard/stevedoring operations concerning safe cargo handling/stowage, pollution prevention and control of OH&S risks are to be defined and assigned. **(Ref. 7; 8.1)** *(Ref. 7.5)* **(Ref. 4.4.6)** **(Ref. 4.4.6)**

Instructions for cargo care are required. *(Ref. 7.5; 6.4; 8.2.4)*

Environmental aspects related to cargo operations shall be identified and considered, e.g. operating hazardous chemicals, cargo handling spills etc. **(Ref. 4.3.1)**

Ship performance

No specific ISM requirement.

Procedures are required to measure and monitor ship performance against charter party. *(Ref. 7.5; 8.2.3; 8.2.4)*

Procedures to measure the key characteristics of ship operations and activities that can have significant environmental impact. Key performance indicators (KPI) could be established based on the targets set.

KPI could for example be emission of CO_2 and NO_x in gram/ton m³. **(Ref. 4.5.1)**

Procedures to measure the key characteristics of ship operations and activities related to OH&S hazards.

(Ref. 4.5.1)

Chartering and operation

Fleet information – operations management

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	–	*7.5*	–	*Ships movement list.*
				Maintaining ship details for customers property (Cargo).

Charter party

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	–	*7.2*	–	*Preparing proposal contract.*
				Charter party.
				Contract reviews.
				Long-term/short-term/spot.
				Assign ship.

Cargo operations

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
7	4.4.6	7.5	4.4.6	Cargo handling instructions/specifications
8.1	4.3.1	*6.4*	4.3.1	**(safety aspects only).**
7		*8.2.4*		**Loading/discharging calculations (stress stability).**
8.1				*Work environment for cargo and handling of it.*
				Monitoring of product.
				Environmental aspects of cargo.
				Occupational health and safety risks related to cargo operations.

Ship performance

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.5.1	*7.5*	4.5.1	*Monitoring the performance of cargo/ship/charter.*
		8.2.3		*Voyage planning, speed and position.*
		8.2.4		**Monitoring the performance of cargo/ship/charter.**
				Monitoring the performance of cargo/ship/charter.

Evaluation of agents/bunkering suppliers

No specific ISM requirement.

Procedures are required for evaluating and monitoring suppliers such as agents, bunker suppliers etc. *(Ref. 7.4)*

The organisation shall establish procedures to communicate relevant procedures and requirements to suppliers and contractors. Requirements could for example be related to emergency preparedness, bunkers quality, overloading etc. Procedures to monitor and measure suppliers such as bunkering suppliers are required. Procedures to follow-up (e.g. by auditing) suppliers and contractors can be required. (Ref. 4.4.6; 4.5.1)

The organisation shall establish procedures to communicate relevant procedures and requirements to suppliers and contractors. Procedures to monitor and measure suppliers are required. (Ref. 4.4.6; 4.5.1)

Claims

No specific ISM requirement.

Procedures are required for measurement, monitoring, analysis and control of nonconformity claims. Procedures for analysis of data for improvement. *(Ref. 8.3; 8.4)*

Appropriate corrective or preventive actions are required. A procedure for receiving, documenting and responding to communication from external interested parties (incl. claims) is also required.

(Ref. 4.4.3; 4.5.3)

Appropriate corrective or preventive actions are required to deal with claims related to accidents of personnel. (Ref. 4.5.2)

Human resources/personnel ship and shore

Hiring/maintaining personnel

Company shall ensure ships manned by qualified personnel and all personnel involved with safety and environment are adequately trained. **(Ref. 3.2; 3.3; 6)** *(Ref. 6.2)* (Ref. 4.4.2) (Ref. 4.4.2)

Procedures required for the organisation to provide the human resources needed to perform, manage and verify work affecting quality. The system to including purchasing of manning agent services. *(Ref. 6.2; 7.4)*

Communicate relevant procedures and requirements to contractors. Require that contractors working on companies' behalf are able to demonstrate that their employees have the requisite training.

(Ref. 4.4.2; 4.4.6.c.)

The 18001 standard requires that contractors working on companies' behalf are able to demonstrate that their employees have the requisite training. (Ref. 4.4.2; 4.4.6c)

Competence/evaluation

Company objective to improve safety management skills; procedures required identifying training needs and ensuring qualified, certified and **medically fit** seafarers.

(Ref. 1.2.2.3; 6.2; 6.5) *(Ref. 6.2.2)* (Ref. 4.4.2) (Ref. 4.4.2)

Procedures required for evaluating effectiveness of training. *(Ref. 6.2.2)*

Identify training needs for employees whose work can cause significant environmental impact. (Ref. 4.4.2)

Identify training needs for employees related to the OH&S consequences of their work activities. (Ref. 4.4.2)

Evaluation of agents/bunkering suppliers

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.4.6	7.4	4.4.6	*Monitoring, handling and review.*
	4.5.1		4.5.1	*Administer approved supplier list and frame contracts.*
				Coordinating partner and approval suppliers.
				Communicate requirements. Monitor and measure performance and compliance. Follow-up of suppliers and contractors.
				Communicate requirements. Monitor and measure performance and compliance. Follow-up of suppliers and contractors.

Claims

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.4.3	8.3	4.4.3	*Contact with charter parties and insurance.*
	4.5.2	8.4	4.5.3	*Contact with cargo brokers/agents.*
				Documented corrective and preventive action.
				External communication.
				External communication.

Human resources/personnel ship and shore

Hiring/maintaining personnel

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
3.2	4.4.2	6.2	4.4.2	Monitoring, handling and review.
3.3	4.4.2	7.4	4.4.2	Communicate requirements.
6	4.4.6		4.4.6.c	Monitor and measure performance and compliance.
				Follow-up of contractors.
				Administer approved supplier list and frame contracts.
				Communicate requirements to manning contractor.
				Communicate requirements to manning contractor.

Competence/evaluation

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2.2.3	4.4.2	6.2.2	4.4.2	Identification of training needs including
6.2	4.4.2	6.2.2	4.4.2	Flag State requirements.
6.5				Company familiarisation.
6.2				Providing identified training.
				Medically fit.
				Evaluate effectiveness of training.
				Identify specific environmental training needs.
				Identify specific OH&S training needs.

Insurance

Liability insurance required. (Ref. 1.2.3)

Purchase procedures apply for any insurance. (Ref. 7.4)

No specific environmental requirements.

No specific OH&S requirements.

Purchasing and contract management

Evaluation and approval of suppliers

No specific ISM requirement.

Procedures for the evaluation, approval and control of suppliers are required, plus procedure for monitoring and verifying acceptable suppliers capabilities. (Ref. 7.4)

Procedures to identify significant environmental aspects of goods and services used are required. Communicate procedures and requirements to suppliers and contractors. Procedures for follow-up of suppliers.
(Ref. 4.3.1; 4.4.6.c)

Procedures to identify OH&S risks of goods, equipment and services purchased and/or used by the organisation are required. Communicate procedures and requirements to suppliers and contractors. Procedures for following-up of suppliers. (Ref. 4.3.1; 4.4.6.c)

Handling of purchase requests

No specific ISM requirement.

Procedures for level of authority to approve requests plus adequate purchase criteria are required. (Ref. 7.4)

Communicate procedures and requirements to suppliers and contractors. (Ref. 4.4.6.c)

Communicate procedures and requirements to suppliers and contractors. (Ref. 4.4.6.c)

Receiving

No specific ISM requirement.

Procedures needed for confirming receipt against requirements, also procedures for dealing with non-conforming receivables and preventing reoccurrence. (Ref. 7.4.3; 8.3)

No specific environmental requirements.

No specific OH&S requirements.

Insurance

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
1.2.3	–	7.4	–	Liability insurance.
				Monitoring, handling and review.

Purchasing and contract management

Evaluation and approval of suppliers

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.3.1	7.4	4.3.1	Administer approved supplier list and frame contracts.
	4.4.6.c		4.4.6.c	Procedures to evaluate, approve and control suppliers.
				Significant environmental aspects of goods and services.
				Communicate requirements to suppliers.
				Follow-up of suppliers.
				Identified OH&S hazards of goods and services.
				Communicate requirements to suppliers.
				Follow-up of suppliers.

Handling of purchase requests

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	4.4.6c	7.4	4.4.6.c	Identify level of authority for approval.
				Adequate purchase procedure.
				Communicate requirements.
				Communicate requirements.

Receiving

ISM	OHSAS 18001	9001:2000	14001:2004	Functional requirements/areas to be considered
–	–	7.4.3	–	Procedures for receipt + records.
		8.3		Corrective actions for N.C of receivables.

Det Norske Veritas
NO-1322 Høvik, Norway
Tel: +47 67 57 99 00
Fax: +47 67 57 99 11

e-mail: ISM@dnv.com
web: www.dnv.com
For further information please contact your local or main DNV office