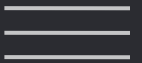


Proposal of SSO provision of STCW

To train ship safety management expert

Safety First



Contents

INDEX

- 01. The necessity of SSO provision
- 02. Training standard proposal
- 03. Conclusion



01

The necessity of SSO provision

D E V E L O P M E N T S T A T U S

Current system

STCW/CONF.2/34

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Section A-II/2

Mandatory minimum requirements for certification of masters and chief mates on ships of 500 gross tonnage or more.

Standard of competence

1

Every candidate for certification as master or chief mate of ships of 500 gross tonnage or more shall be required to demonstrate the competence to undertake, at the management level, the tasks, duties and responsibilities listed in column 1 of table A-II/2.

2

The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/2. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/1 for officers in charge of a navigational watch.

3

Bearing in mind that the master has ultimate responsibility for the safety and security of the ship, its passengers, crew and cargo, and for the protection of the marine environment against pollution by the ship, and that a chief mate shall be in a position to assume that responsibility at any time, assessment in these subjects shall be designed to test their ability to assimilate all available information that affects the safety and security of the ship, its passengers, crew or cargo, or the protection of the marine environment.

4

The level of knowledge of the subjects listed in column 2 of table A-II/2 shall be sufficient to enable the candidate to serve in the capacity of master or chief mate*.

5

The level of theoretical knowledge, understanding and proficiency required under the different sections in column 2 of table A-II/2 may be varied according to whether the certificate is to be valid for ships of 3,000 gross tonnage or more or for ships of between 500 gross tonnage and 3,000 gross tonnage.

6

Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part and the guidance given in part B of this Code.

7

Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/2.

Near-coastal voyages

8

An Administration may issue a certificate restricted to service on ships engaged exclusively on near-coastal voyages and, for the issue of such a certificate, may exclude such subjects as are not applicable to the waters or ships concerned, bearing in mind the effect on the safety of all ships which may be operating in the same waters.

The relevant IMO Model Course(s) may be of assistance in the preparation of courses.

I/CONF/STCW/2/34.doc

<STCW A-II/2>

STCW/CONF.2/34

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Section A-III/2

Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more.

Standard of competence

1

Every candidate for certification as chief engineer officer and second engineer officer of seagoing ships powered by main propulsion machinery of 3,000 kW power or more shall be required to demonstrate ability to undertake, at the management level, the tasks, duties and responsibilities listed in column 1 of table A-III/2.

2

The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-III/2. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-III/1 for officers in charge of an engineering watch.

3

Bearing in mind that a second engineer officer shall be in a position to assume the responsibilities of the chief engineer officer at any time, assessment in these subjects shall be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the ship's machinery and the protection of the marine environment.

4

The level of knowledge of the subjects listed in column 2 of table A-III/2 shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer*.

5

Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part and the guidance given in part B of this Code.

6

The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these knowledge requirements. Any such limitation shall be stated on the certificate and in the endorsement.

7

Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-III/2.

Near-coastal voyages

8

The level of knowledge, understanding and proficiency required under the different sections listed in column 2 of table A-III/2 may be varied for engineer officers of ships powered by main propulsion machinery with limited propulsion power engaged on near-coastal voyages, as considered necessary, bearing in mind the effect on the safety of all ships which may be operating in the same waters. Any such limitation shall be stated on the certificate and in the endorsement.

The relevant IMO Model Course(s) may be of assistance in the preparation of courses.

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<STCW A-III/2>

IMOINTERNATIONAL MARITIME ORGANIZATION

E

MARITIME SAFETY COMMITTEE

90th session

Agenda item 16

MSC 90/16/1

26 January 2012

Original: ENGLISH

TECHNICAL ASSISTANCE SUB-PROGRAMME IN MARITIME SAFETY AND SECURITY

Periodical report on model courses

Note by the Secretariat

SUMMARY

Executive summary:

This document provides an overview of the work done on the model course project since MSC 89

Strategic direction:

5.2

High-level action:

5.2.2

Planned output:

No related provisions

Action to be taken:

Paragraph 4

Related documents:

MSC 68/23 and MSC 89/14/1

General

1

In response to the Committee's instructions, at its sixty-eighth session (MSC 68/23, paragraph 12.5) and all sessions thereafter, the Secretariat continued work intersessionally on the model course project, progress on which is reported in the ensuing paragraphs.

Overview

2

Attached in the annex is updated information on IMO model courses which have been printed and are available for use; courses which are being revised or to be revised; courses which have been developed and prepared for publication; those which are out of print pending revision; and those which have been translated and published in French and Spanish.

Current work

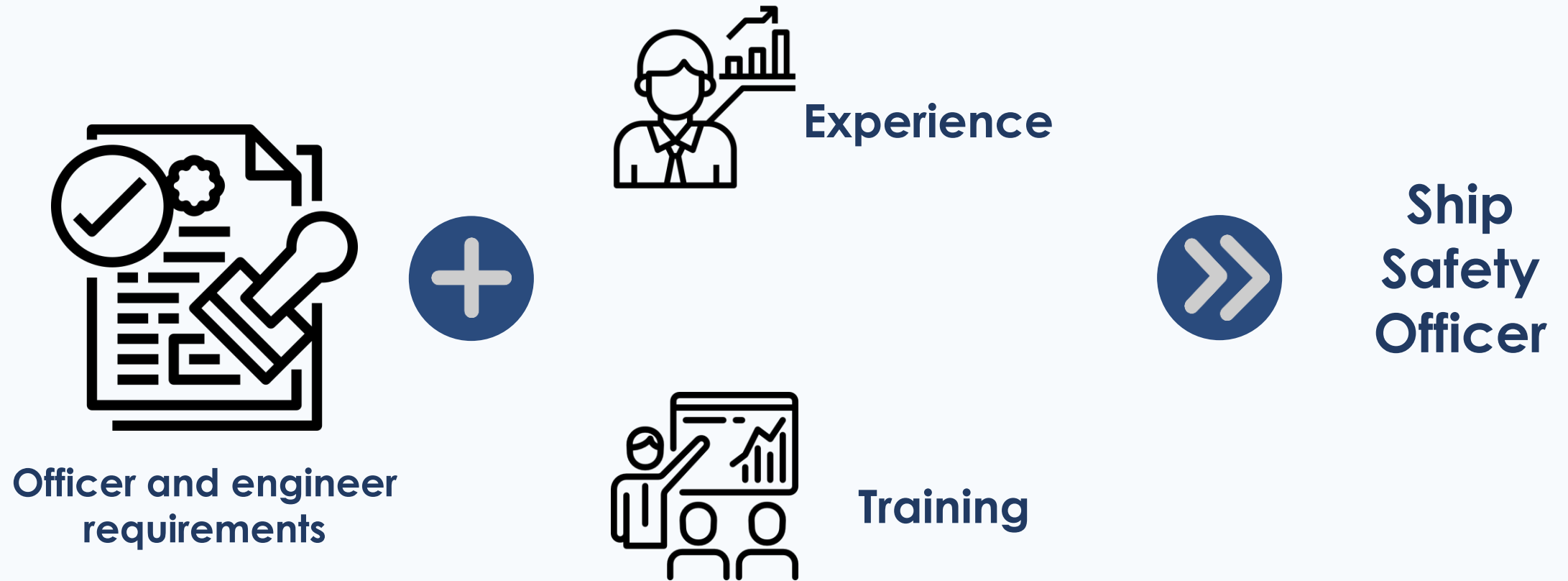
3

Existing model courses are being revised and updated within the available resources in a phased manner.

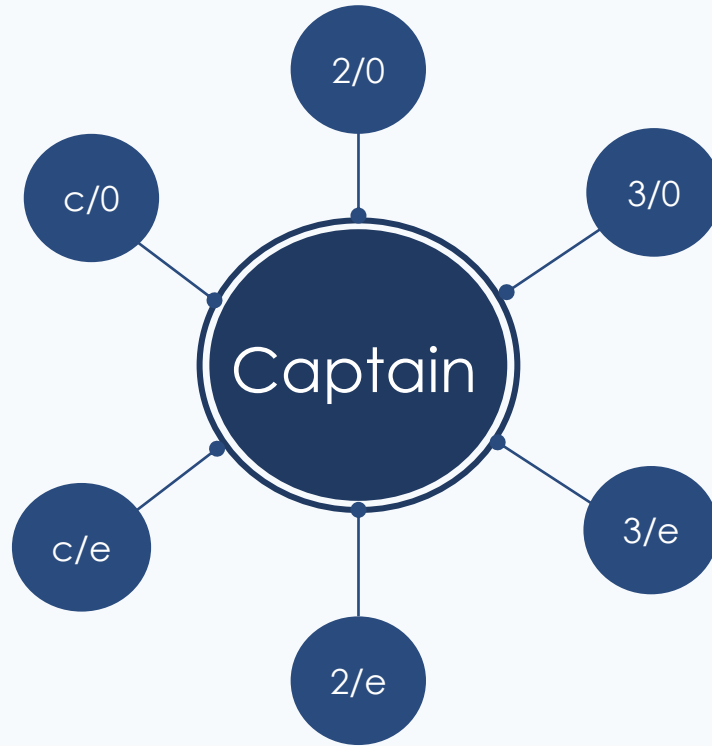
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<IMO Model Course 3.11>

- Current system

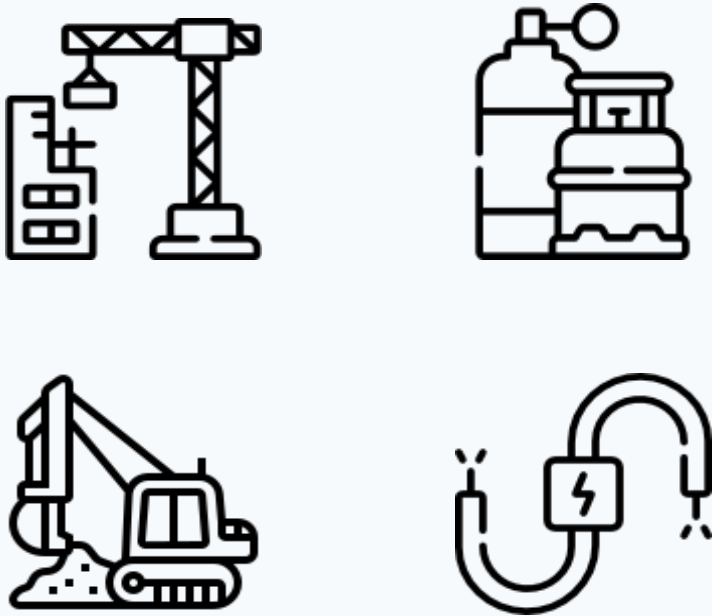


- Problem of current system

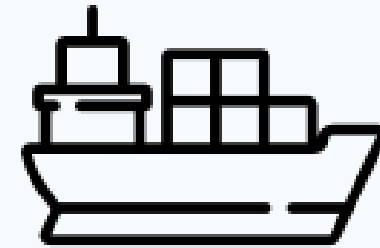


Safety management expert? ➡ Absence

- Acts of other fields



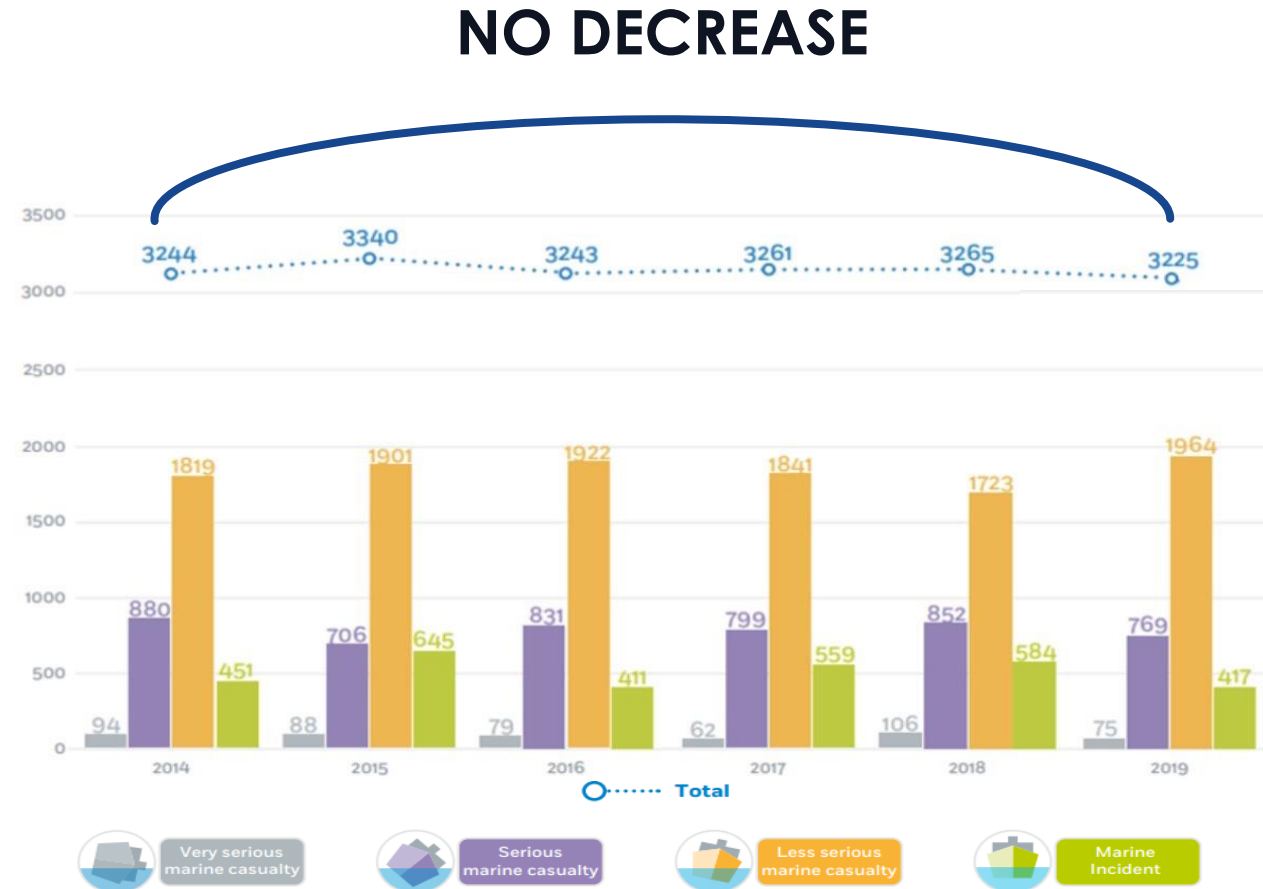
Occupation Safety and Health acts,
High-Pressure Gas Safety Control act,
Nuclear Safety act ...



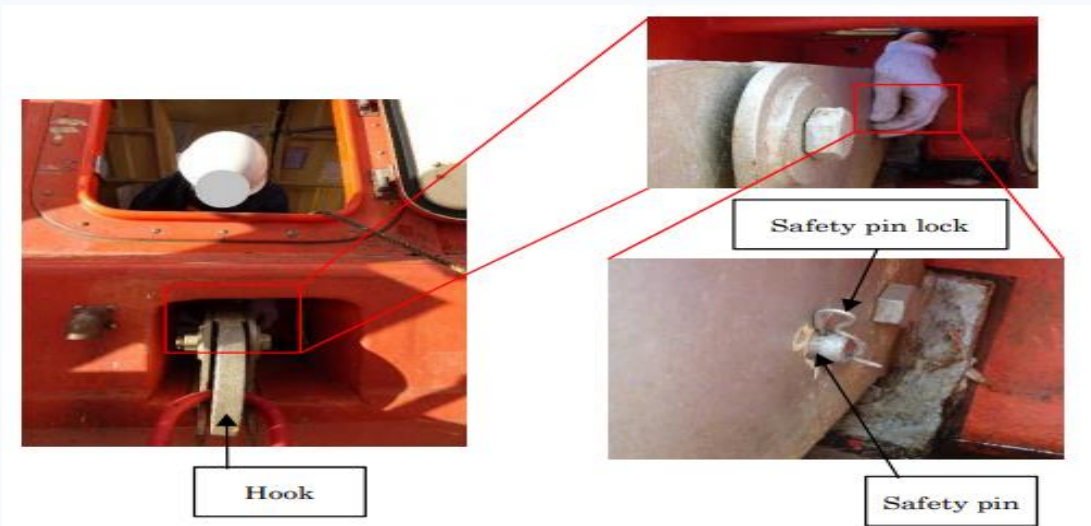
- PSC detention case

| PLACE | ISM CODE | Point of criticism | PSC CODE |
|------------------|----------|--|----------|
| Japan (Yokohama) | 5 | The captain and some crew members are completely unaware of their duties | 30 |
| | 6 | It did not provide essential guidelines such as safety and environmental protection-related tasks for new recruiters and newly replaced employees | 30 |
| Japan | 6 | The captain is not familiar with the safety management system manual, and the company did not provide sufficient safety management training | 18 |
| Korea (Incheon) | 11 | SMS is not written in official language | 30 |
| Australia | 10 | Cracks on the hull (SMS didn't meet the requirement of ISM) | 30 |
| USA (Honolulu) | 8 | Defects in life equipment managing | 30 |

- Consistent Marine Accident



- Ship safety accident case



| | |
|----------------------------|--|
| Accident type | Fatality of a crew member |
| Date | November 16, 2019 |
| Location | Wakayama Shimotsu Port, Wakayama Prefecture |
| Summary of the Accident | A crew member died of a fall from a lifeboat to the deck when engaging in the lifting and recovery of the lifeboat in an abandon ship drill. |

● IMO Strategic Direction

OVERARCHING PRINCIPLES FOR THE ORGANIZATION'S STRATEGIC PLAN 2018 to 2023

3 The Strategic Plan identifies the strategic directions on which IMO will focus in the period 2018 to 2023. The IMO organs will continue their work to fulfil the purposes of the Organization, as set out in Article 1 of the IMO Convention, while sustaining the system of global maritime legislation and ensuring a level playing field for all States involved in international shipping. In doing so, IMO will uphold its leadership role in ensuring a balance for international shipping between the need for economic development, facilitation of international trade, safety, security and environmental protection. IMO will ensure that the views of all stakeholders are taken into account in its decision-making processes and continue to pay particular attention to the needs of developing countries, especially small island developing States (SIDS) and least developed countries (LDCs).

4 The safety and security of life at sea, protection of the environment, and world trade all depend on the competence and professionalism of the personnel employed or engaged in the maritime sector, who need to have the relevant skills and understanding to ensure that IMO instruments are effectively reviewed, developed, implemented, applied and enforced.

SD 1: Improve implementation

13 IMO has almost 60 years of experience, developing more than 50 international treaties, together with the related standards, guidelines and other texts. Only through the entry into force of those instruments and the effective, efficient and consistent implementation and enforcement of their provisions can the full benefits from this extensive body of international law be realized. To that end, the current situation demands that IMO place increased focus on implementation of IMO instruments as well as promotion of the entry into force of instruments.

14 The crucial role played by IMO in creating a level playing field for its Members can only be achieved through effective and uniform implementation of IMO instruments, their enforcement by the States parties to them, and full compliance by the States concerned and the shipping industry.

15 IMO will provide States and the industry with the information they need to better identify and understand barriers to implementation, and will consider ways to eliminate those barriers, including through analysis of the findings from the Member State Audit Scheme and/or data from other sources. IMO will promote the exchange of best practices among all stakeholders.

Implementation and enforcement ✗



Ship Safety Officer provision of STCW



Effective, efficient and consistent implementation



02

Training Standard Proposal

D E V E L O P M E N T S T A T U S

- Advisable provision in ISM Code for Ship Safety Officer

Ship Safety Officer Training and Qualification

-Training

- 1) knowledge and understanding of the ISM Code, safety management system, mandatory rules and regulations, applicable codes, guidelines and standards as appropriate,
- 2) assessment techniques of examining, questioning, evaluating and reporting,
- 3) technical or operational aspects of safety management,
- 4) appropriate knowledge of shipping and shipboard operations,
- 5) participation in at least one marine-related management system audit,
- 6) effective communications with shipboard staff and company

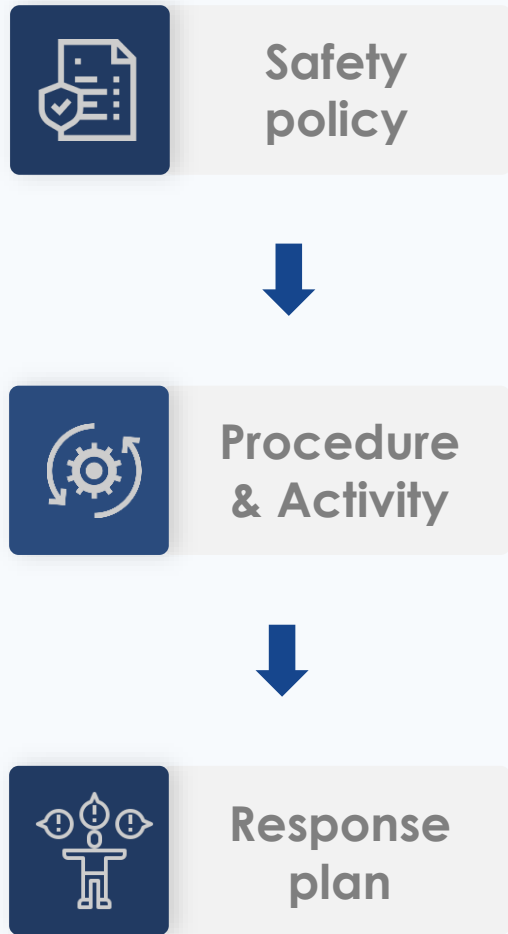
-Qualification

- 1) qualifications from a tertiary, institution recognized by the Administration or by the recognized organization, according to STCW A-II & A-III,
- 2) qualification and seagoing experience as a certified ship officer pursuant to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 as amended,
- 3) other formal education combined with not less than three years practical experience in ship as a deck or engine officer.

01 Deal with Safety Management System

| Column 1 | Column 2 | Column 3 | Column 4 |
|---|---|---|--|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Supervise and ensure the compliance of the safety management system | <p>Understanding of international maritime safety policy and responsibilities of Governments, companies and designated persons including elements that may relate to ship safety</p> <p>Knowledge of the purpose and the elements that make up a safety management system, related procedures and maintenance of records, including those that may lead to safety hazards</p> <p>Understanding of procedures to be employed in implementing a safety management system and reporting of accident</p> <p>Knowledge of the requirements and procedures for conducting internal audits, regular safety inspections, control and monitoring of safety activities specified in a safety management system</p> <p>Knowledge of the requirements and procedures for reporting to the Master and the company safety representative any deficiencies and non-conformities identified during internal audits, periodic reviews, and safety inspections</p> <p>Knowledge of the methods and procedures used to modify the safety management system</p> <p>Understanding of safety-related contingency plans and the procedures for responding to hazards of safety, including provisions for maintaining critical operations of the ship/port interface, including also elements that may relate to safety hazards</p> <p>Knowledge of coordinating the safety measures to be maintained when cargo work is in progress by liaising with the port representative in regard of safety management plan</p> <p>Proficiency of maritime safety terms and definitions, including elements that may lead to safety hazards</p> | Assessment of evidence obtained from approved training or examination | <p>Development and review of the safety management plan is in accordance with the principles established by the ISM Code.</p> <p>Legislative requirements relating to safety are correctly identified</p> <p>Communications within the ship safety officer's area of responsibility are clear and understood</p> |

01 Deal with Safety Management System



ISM Code

1.3 Application

The requirements of this Code may be applied to all ships.

1.4 Functional requirements for a safety management system

Every Company should develop, implement and maintain a safety management system which includes the following functional requirements:

- .1 a safety and environmental-protection policy;
- .2 instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;
- .3 defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;
- .4 procedures for reporting accidents and non-conformities with the provisions of this Code;
- .5 procedures to prepare for and respond to emergency situations; and
- .6 procedures for internal audits and management reviews.

2 SAFETY AND ENVIRONMENTAL-PROTECTION POLICY

2.1 The Company should establish a safety and environmental-protection policy which describes how the objectives given in paragraph 1.2 will be achieved.

2.2 The Company should ensure that the policy is implemented and maintained at all levels of the organization, both ship-based and shore-based.

02 Survey potential hazards

| Column 1 | Column 2 | Column 3 | Column 4 |
|--|--|---|--|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Survey potential hazards affecting the health and safety | <p>Understanding of risk assessment and assessment tools</p> <p>Knowledge of safety survey documentation</p> <p>Understanding enabling recognition of elements that can cause harm to ship and crew safety</p> <p>Knowledge in handling sensitive safety-related information and safety-related communications</p> <p>Proficiency in handling dangerous cargoes based on IMDG code and IMSBC code.</p> | <p>Assessment of evidence obtained from approved training, or approved experience and examination</p> | <p>Procedures and actions are in accordance with the principles established by the ISM Code</p> <p>Procedures achieve a state of readiness to respond to changes in the safety status</p> <p>Communications within the ship safety officer's area of responsibility are clear and understood</p> |

02 Survey potential hazards

Survey tool & documents



Fellow crews



Safety-related
information

ISM Code

1.1.8 *Observation* means a statement of fact made during a safety management audit and substantiated by objective evidence.

1.1.9 *Non-conformity* means an observed situation where objective evidence indicates the non-fulfilment of a specified requirement.

1.1.10 *Major non-conformity* means an identifiable deviation that poses a serious threat to the safety of personnel or the ship or a serious risk to the environment that requires immediate corrective action or the lack of effective and systematic implementation of a requirement of this Code.

1.1.11 *Anniversary date* means the day and month of each year that corresponds to the date of expiry of the relevant document or certificate.

1.1.12 *Convention* means the International Convention for the Safety of Life at Sea, 1974, as amended.

1.2 Objectives

1.2.1 The objectives of the Code are to ensure 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.

1.2.2 Safety management objectives of the Company should, *inter alia*:

- .1 provide for safe practices in ship operation and a safe working environment;
- .2 assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards; and
- .3 continuously improve safety management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.

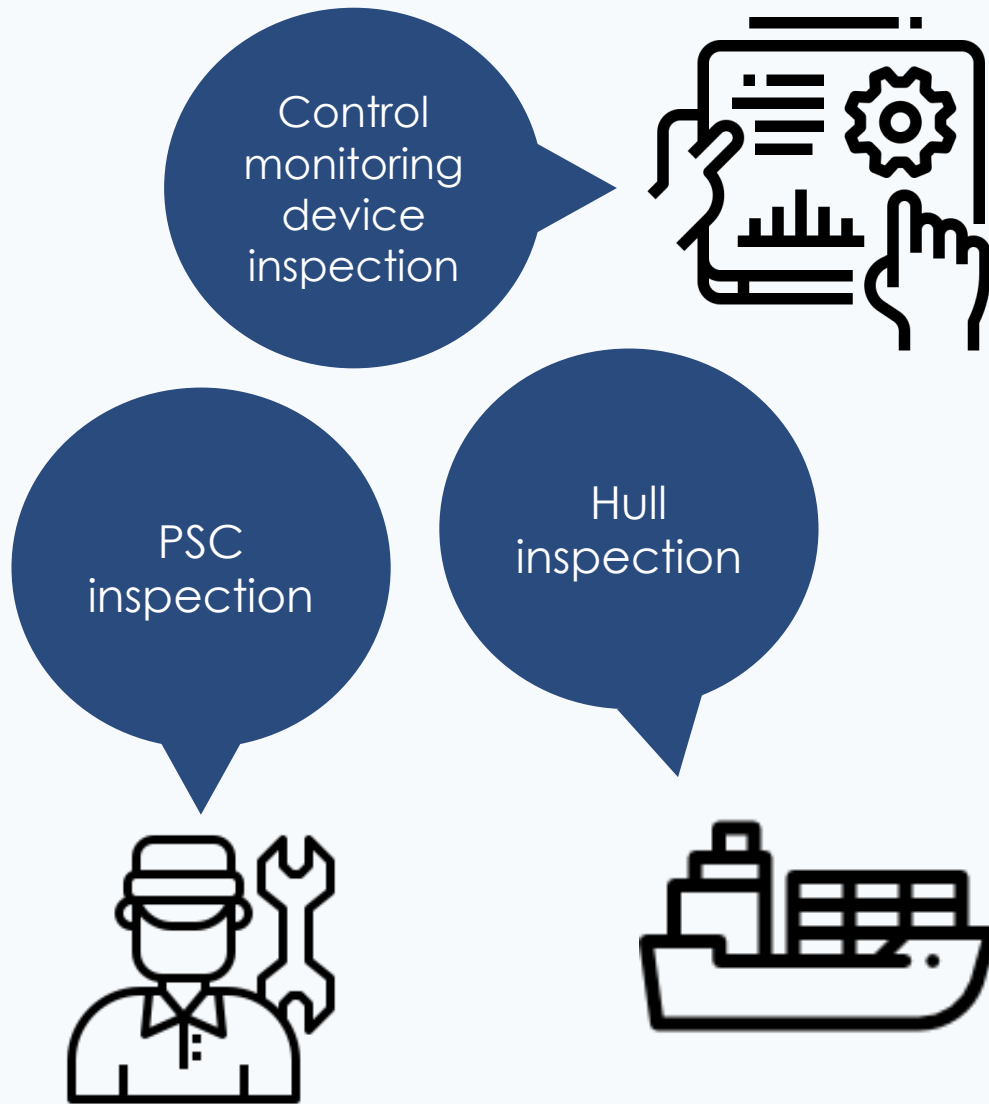
1.2.3 The safety management system should ensure:

- .1 compliance with mandatory rules and regulations; and
- .2 that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account.

03 Undertake regular inspections

| Column 1 | Column 2 | Column 3 | Column 4 |
|---|--|---|--|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Undertake regular inspections of the ship to ensure that appropriate safety measures are implemented and maintained | <p>Knowledge of procedures on how the inspections shall be carried out</p> <p>Proficiency of PSC inspection and other additional tests</p> <p>Understanding of repair and maintenance of engine-related things, such as oil</p> <p>Understanding of hull inspection</p> <p>Understanding of operation and inspection of control monitoring devices</p> | Assessment of evidence obtained from approved training or examination | <p>Procedures achieve a state of readiness to maintain safety on the ship</p> <p>Communications within the ship safety officer's area of responsibility are clear and understood</p> |

03 Undertake regular inspections



ISM Code

11.3 The documents used to describe and implement the safety management system may be referred to as the Safety Management Manual. Documentation should be kept in a form that the Company considers most effective. Each ship should carry on board all documentation relevant to that ship.

12 COMPANY VERIFICATION, REVIEW AND EVALUATION

12.1 The Company should carry out internal safety audits on board and ashore at intervals not exceeding twelve months to verify whether safety and pollution-prevention activities comply with the safety management system. In exceptional circumstances, this interval may be exceeded by not more than three months.

12.2 The Company should periodically evaluate the effectiveness of the safety management system in accordance with procedures established by the Company.

12.3 The audits and possible corrective actions should be carried out in accordance with documented procedures.

12.4 Personnel carrying out audits should be independent of the areas being audited unless this is impracticable due to the size and the nature of the Company.

12.5 The results of the audits and reviews should be brought to the attention of all personnel having responsibility in the area involved.

12.6 The management personnel responsible for the area involved should take timely corrective action on deficiencies found.

04 Maintain safety equipment

| Column 1 | Column 2 | Column 3 | Column 4 |
|--|--|---|--|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Ensure that safety equipment and systems, if any, are properly operated, tested and calibrated | <p>Understanding of the various types of safety equipment and systems and their limitations</p> <p>Knowledge of the procedures, instructions and guidance on the use of ship safety alert systems</p> <p>Knowledge of the methods for testing, calibrating, and maintaining safety systems and equipment, particularly whilst at sea</p> | Assessment of evidence obtained from approved training or examination | Procedures and actions are in accordance with the principles established by the ISM Code |

04 Maintain safety equipment



**Proper Utilization of
Safety Equipment**

ISM Code

10 MAINTENANCE OF THE SHIP AND EQUIPMENT

10.1 The Company should establish procedures to ensure that the ship is maintained in conformity with the provisions of the relevant rules and regulations and with any additional requirements which may be established by the Company.

10.2 In meeting these requirements, the Company should ensure that:

- .1 inspections are held at appropriate intervals;
- .2 any non-conformity is reported, with its possible cause, if known;
- .3 appropriate corrective action is taken; and
- .4 records of these activities are maintained.

10.3 The Company should identify equipment and technical systems the sudden operational failure of which may result in hazardous situations. The safety management system should provide for specific measures aimed at promoting the reliability of such equipment or systems. These measures should include the regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use.

10.4 The inspections mentioned in 10.2 as well as the measures referred to in 10.3 should be integrated into the ship's operational maintenance routine.

11 DOCUMENTATION

11.1 The Company should establish and maintain procedures to control all documents and data which are relevant to the safety management system.

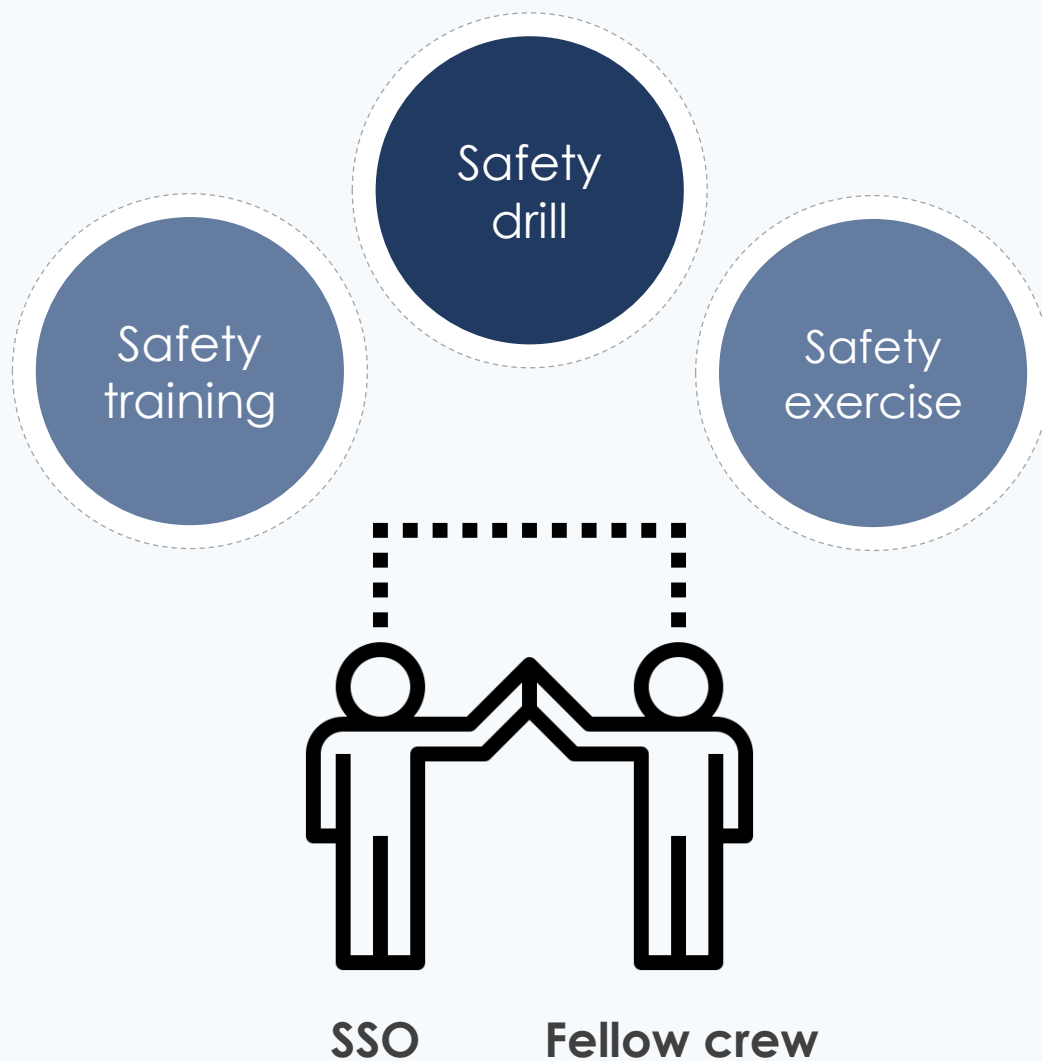
11.2 The Company should ensure that:

- .1 valid documents are available at all relevant locations;
- .2 changes to documents are reviewed and approved by authorized personnel; and
- .3 obsolete documents are promptly removed.

05 Encourage safety awareness

| Column 1 | Column 2 | Column 3 | Column 4 |
|----------------------------|---|---|---|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Encourage safety awareness | <p>Understanding of training, drill and exercise requirements under relevant conventions, codes and IMO circulars</p> <p>Knowledge of the methods for enhancing safety awareness on board</p> <p>Knowledge of the methods for assessing the effectiveness of drills and exercises</p> | Assessment of evidence obtained from approved training or examination | Communications within the ship safety officer's area of responsibility are clear and understood |

05 Encourage safety awareness



ISM Code

Document of Compliance or demonstrated for issuance of the Interim Document of Compliance;

.3 the Company has planned the internal audit of the ship within three months;

.4 the master and officers are familiar with the safety management system and the planned arrangements for its implementation;

.5 instructions, which have been identified as being essential, are provided prior to sailing; and

.6 relevant information on the safety management system has been given in a working language or languages understood by the ship's personnel.

1.2 Objectives

1.2.1 The objectives of the Code are to ensure 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.

1.2.2 Safety management objectives of the Company should, *inter alia*:

.1 provide for safe practices in ship operation and a safe working environment;


.2 assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards; and

.3 continuously improve safety management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.

1.2.3 The safety management system should ensure:

.1 compliance with mandatory rules and regulations; and

.2 that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account.



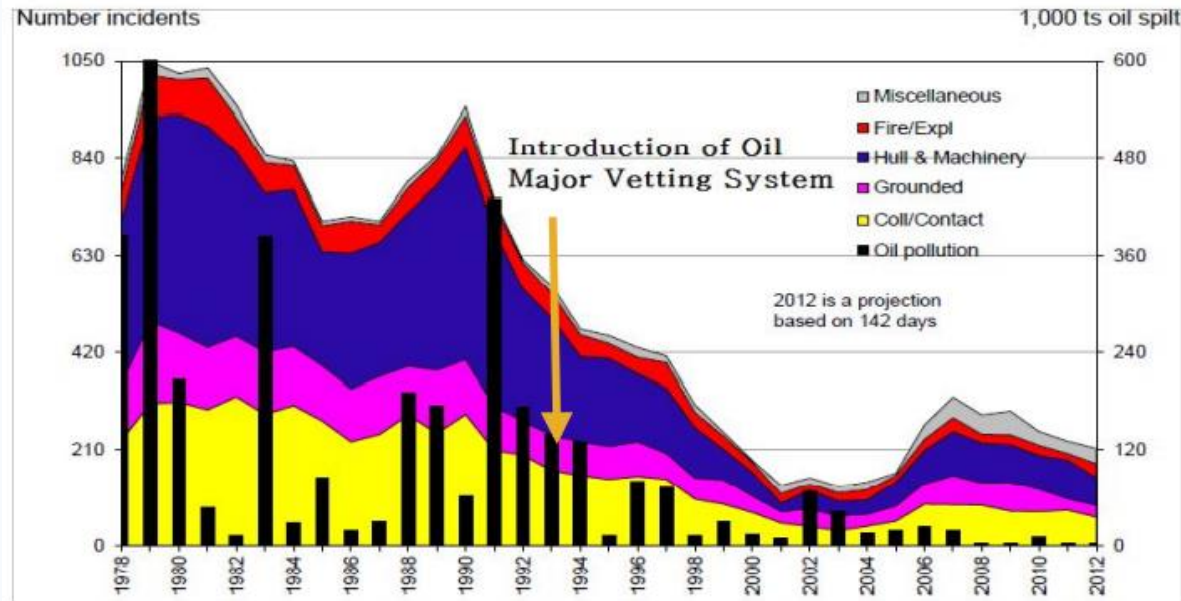
03 Conclusion

D E V E L O P M E N T S T A T U S



- Expected effect

1. Manage the ship's **inherent potential risk** to prevent accidents.



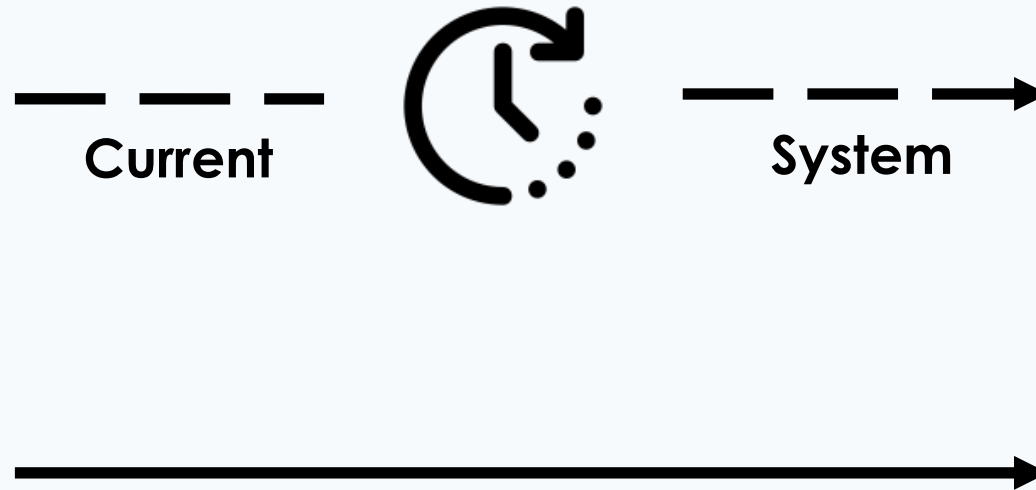
[In the case of coastal tankers]

The Oil Major Betting system was introduced to strengthen the **safety management** of the coastal tanker.

After that, overall marine accidents show a **sharp decline**.

- Expected effect
 2. It is possible to **respond quickly** to changes.

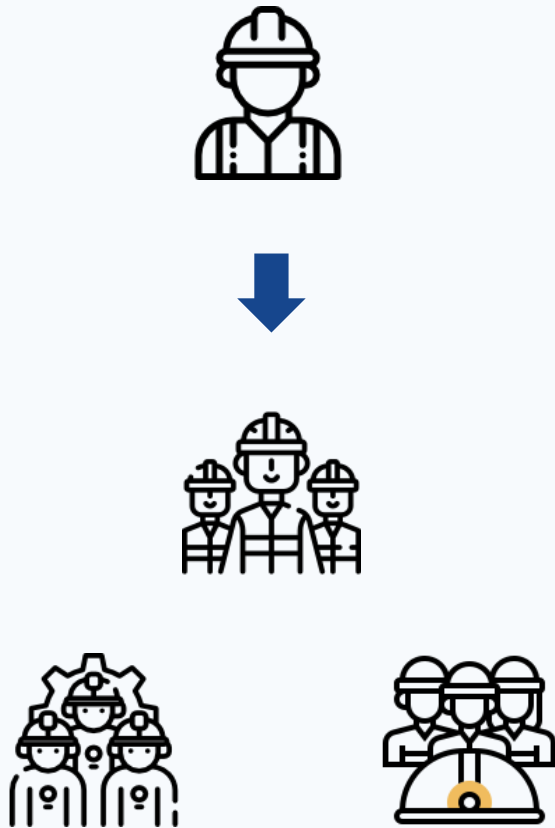
**New
Trend**



Ship Safety Officer provision of STCW

- Expected effect

- 3. Skilled personnel can be **introduced stably**.



Professional ship safety **officer trained under clear STCW** standard can be **an essential human resource** in ship safety managing industry later.

In case of Japan, they are suffering from lack of human resource to manage ship safety forcing them to hire foreign manager or consign it to other company.

Through this case we can learn that **well trained ship safety officer** is useful not only in ship but also in onshore **ship safety management**.

- Expected effect

4. **Responsibility** can be **clarified**.



- STCW's purpose



Reducing marine accidents
through **human management**



The most important thing is,
“**Safety management**”



EXPERT

THANKS WATCHING

Safety First

