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**GUIDELINES ON SHIPPING COMPANIES’  
FULFILLMENT OF PRIMARY RESPONSIBILITY  
FOR WORK SAFETY  
(VERSION 1.0)**

CHINA MARITIME SAFETY ADMINISTRATION

NOVEMBER, 2025

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# **1 General Provisions**

## **1.1 Purpose**

In order to thoroughly implement the important expositions, instructions and directives of President Xi Jinping on work safety, and to carry out the arrangements and requirements of the Ministry of Transport on transport sector work safety, these Guidelines are formulated to:

- (1) provide guidance to shipping companies in fulfilling their primary responsibility for work safety;
- (2) improve the dual prevention mechanism for graded risk control and hazard identification and rectification;
- (3) strengthen safety management during key periods and for key ships;
- (4) prevent and mitigate major safety risks arising from navigation and operations under adverse weather conditions, collisions between merchant ships and fishing ships, and ship-bridge collisions; enhance shore-based management and control over ship safety; and
- (5) resolutely curb the occurrence of serious and extraordinarily serious waterborne traffic accidents.

## **1.2 Basis for preparation**

These Guidelines are formulated in accordance with applicable laws, regulations and administrative rules, as well as relevant international conventions concluded or acceded to by China, including the following:

- Law of the People's Republic of China on Work Safety;
- Maritime Traffic Safety Law of the People's Republic of China;
- Marine Environmental Protection Law of the People's Republic of China;
- Law of the People's Republic of China on Prevention and Control of Water Pollution;
- Regulations of The People's Republic Of China Concerning The Administration of Traffic Safety On Inland Waters;
- Regulations of the People's Republic of China on Seafarers;
- Regulations on the Reporting, Investigation and Disposition of Work Safety Accidents;
- Regulations of the People's Republic of China on the Investigation and Handling of Maritime Traffic Accidents;
- Regulations of the People's Republic of China on the Administration of Domestic Water Transport;
- Regulations for the Survey of Ships and Offshore

- Installations of the People's Republic of China;
- Provisions of the People's Republic of China on the Administration of Safety and Pollution Prevention of Shipping Companies;
  - Provisions on the Administration of Domestic Water Transport;
  - Provisions on the Administration of Auxiliary Businesses of Domestic Water Transport;
  - Regulations of the People's Republic of China on Watchkeeping for Seafarers on Sea-going Ships;
  - Regulations of the People's Republic of China on Watchkeeping for Seafarers on Inland Waterway Ships;
  - Provisions on the Safety Supervision and Administration of the Carriage of Dangerous Goods by Ships;
  - Measures for the Statistics of Water Traffic Accidents;
  - Measures for the Extraction and Use of Work Safety Expenses of Enterprises.

### **1.3 Scope of Application**

These Guidelines apply to activities carried out by shipping companies and their employees in fulfilling their primary responsibility for waterborne traffic safety.

For the purposes of these Guidelines, shipping companies refer to production and business entities engaged in waterborne transport, as well as related activities such as waterborne and underwater construction operations, which, in accordance with relevant laws and regulations, bear responsibilities for safety and pollution prevention.

#### **1.4 Principles for Preparation**

##### **1.4.1 People-centred and life-first approach**

Work safety should be people-oriented, with the protection of human life and safety as the top priority, and should be guided by the principle of safe and sustainable development.

##### **1.4.2 Safety first and prevention-oriented**

Priority should be given to prevention, with risks controlled before hazards emerge and accident hazards eliminated before accidents occur, so as to prevent and mitigate major safety risks at their source.

##### **1.4.3 Full participation, comprehensive coverage and whole-process management**

A comprehensive safety management system should be established, ensuring participation at all levels, full coverage of all activities, and management throughout the entire operational

process, with responsibilities clearly assigned and effectively implemented so as to continuously improve safety management and overall safety performance.

#### 1.4.4 Focus on key areas while ensuring overall coordination

Emphasis should be placed on key aspects of work safety to achieve targeted improvements, while ensuring coordination across all relevant areas so as to promote overall and balanced advancement.

## **2 Establish and Improve the Work Safety Responsibility System**

### **2.1 Implement the Primary Responsibility for Work Safety**

2.1.1 The principal persons in charge (i.e. legal representative and the person exercising actual control, etc.) should be the primary persons responsible for work safety and should bear overall responsibility for work safety within the company. Shipping companies are encouraged to manage self-owned ships. Companies may designate a dedicated person in charge of work safety to bear the responsibilities for work safety within the scope of assigned duties.

2.1.2 The principal persons in charge should firmly uphold the rule-of-law approach, ensure the timely and proactive acquisition and strict implementation of laws, regulations and standards related to work safety, and, in accordance with the law, establish and improve work safety rules, procedures and preventive measures.

2.1.3 The principal persons in charge should personally promote the establishment of work safety systems, conduct on-site inspections of work safety practices, supervise the implementation of work safety systems, and study and address

prominent issues in work safety.

2.1.4 Shipping companies should define, in written form, the duties and responsibilities of the principal persons in charge, which should include, at a minimum, the following:

- (1) establishing, improving and implementing a work safety responsibility system covering all personnel;
- (2) formulating and implementing work safety rules, regulations and operating procedures;
- (3) formulating and implementing work safety education and training programmes;
- (4) ensuring the effective provision and use of resources and funds for work safety;
- (5) establishing and implementing of the dual prevention mechanism for risk classification and hazard identification and rectification, supervising and inspecting work safety activities, taking the lead in identifying ship safety hazards, and promptly eliminating potential production accident hazards;
- (6) formulating and implementing emergency response plans for production accidents;
- (7) promptly and truthfully reporting production accidents.

## **2.2 Implement Work Safety Responsibilities for All Personnel**

2.2.1 Shipping companies should, in accordance with applicable laws and regulations, establish work safety management bodies and appoint dedicated work safety management personnel. The principal persons in charge, persons in charge of work safety, and other work safety management personnel should possess work safety knowledge and management competence commensurate with the production and business activities in which they are engaged.

2.2.2 Shipping companies should, based on the nature, characteristics and content of each position, clearly define responsible persons, scopes of responsibility and responsibility lists for each post, and establish work safety responsibilities covering personnel from the principal persons in charge to front-line employees.

2.2.3 Shipping companies should, in accordance with applicable requirements, appoint full-time superintendents commensurate with their scope of operations and the number of ships operated. Companies are encouraged to employ full-time superintendents under the age of 65. For seagoing shipping companies, the senior management team should include at least one member holding a valid management-level certificate of competency appropriate to

the ship type and operating area.

2.2.4 Shipping companies should include all departments or positions involved in safety and pollution prevention within the scope of the work safety responsibility system for all personnel. At a minimum, the following departments or positions should be covered:

- (1) the senior management team of the company, including the principal persons in charge;
- (2) positions responsible for the monitoring of safety and pollution prevention activities and for internal audits;
- (3) departments or positions responsible for safety and pollution prevention management;
- (4) departments or positions responsible for production and operational management, including ship scheduling, project management and branch or representative offices;
- (5) departments or positions responsible for human resources, finance and ship logistics support;
- (6) masters and crew members.

2.2.5 Shipping companies should establish a system of safety and pollution prevention responsibility commitments at all levels:

- (1) the principal persons in charge should formally set out their safety and pollution prevention responsibilities through

written commitments, which should be made publicly available;

(2) shore-based personnel should, in accordance with their respective duties, sign safety and pollution prevention responsibility commitments at different levels, and masters should sign such commitments with the principal persons in charge;

(3) senior officers and other crew members on board should sign safety and pollution prevention responsibility commitments with the master.

2.2.6 Shipping companies should establish corresponding assessment, evaluation, and incentive mechanisms, and should conduct annual evaluations of the implementation of the work safety responsibility system for all personnel. The evaluation results should be linked to employees' remuneration, promotion and other relevant matters, so as to encourage proactive participation by all personnel in work safety and to promote the effective implementation of the work safety responsibility system.

## **2.3 Improve Work Safety Rules and Arrangements**

2.3.1 Shipping companies should establish and improve the following basic arrangements:

- (1) a work safety responsibility framework for all personnel, including policies and objectives for safety and pollution prevention management, responsible persons for each position, scopes of responsibility, and assessment criteria;
- (2) dual prevention systems for risk classification management and control and hazard identification and rectification, including routine risk control and hazard identification and rectification measures such as voyage safety risk assessments, “dual verification” for high-risk operations, and shore-based duty arrangements, as well as systems for the identification and control of major safety hazards, safety management during key periods, and the prevention and control of major risks;
- (3) procedures for learning lessons from accidents and near-miss incidents, and for safety education and training;
- (4) procedures for the maintenance and upkeep of ships and equipment;
- (5) arrangements for ship pollution prevention management;
- (6) emergency response and support system;
- (7) reporting procedures for accidents, near-miss incidents, and other significant matters;
- (8) arrangements for the extraction, management and use of work

safety funds.

2.3.2 Shipping companies required to establish a safety management system should, in accordance with the Regulations on the Safety and Pollution Prevention Management of Shipping Companies of the People's Republic of China and the Rules on the Safe Operation of Ships and the Prevention of Pollution of the People's Republic of China, establish, implement and maintain a safety and pollution prevention management system for shipping companies, improve safety and pollution prevention conditions, ensure the safe operation of ships, and prevent pollution of the marine and inland water environments.

## **2.4 Increase Investment in Work Safety Funds**

2.4.1 Shipping companies should incorporate work safety investments into their annual production and operational plans and financial budgets, timely allocating and using work safety funds as stipulated.

2.4.2 The work safety expenditure should be calculated based on the previous year's actual operating revenue. General cargo shipping companies should allocate 1% for safety production, while passenger transport and dangerous goods transport companies should allocate 1.5%. Companies should strictly

adhere to the stipulated standards for work safety expense allocation and should not unilaterally reduce the allocation ratio or divert, misappropriate these funds.

2.4.3 The use of work safety funds should, at a minimum, cover expenditures for safety production equipment and facilities, risk identification and control, hazard investigation and rectification, equipment maintenance and upkeep, safety education and training, labour protection equipment provision, insurance, emergency drills, accident response, and other work safety expenses.

## **2.5 Promote the Development of Safety Culture**

2.5.1 Shipping companies should clearly define their safety goals and values, focusing on the core safety philosophy of "Safety first, prevention-oriented and full participation". Through continuous education, clear leadership commitment, and sound institutional arrangements, companies should enhance safety awareness among all employees and develop a unique safety culture.

2.5.2 Shipping companies should enrich safety culture activities and foster a safety culture atmosphere, through awareness-raising campaigns and diversified initiatives such as "Work Safety Month" and "Safety Promotion and Consultation Day", as well as accident case-based warning education, safety knowledge

competitions, emergency drills, and safety-themed debates.

2.5.3 Encourage the formation of a positive safety culture ecology at all levels, while extending the safety culture efforts to frontline teams and work sites.

2.5.4 Shipping companies should establish a goal-oriented assessment and incentive mechanism that positively reinforces safe behaviors, to promote the transmission of safety concepts from passive safety compliance to active safety awareness and responsibility, and to ultimately achieve continuous improvement in safety management and a self-motivated continuation of safety culture.

### **3 Deepen The Dual Prevention Mechanisms For Risk Classification Management And Control And Hazard Identification And Rectification**

#### **3.1 Establish and Improve Risk Prevention and Resolution Mechanisms**

##### **3.1.1 Establish and Implement a Safety Risk Classification Management and Control System**

3.1.1.1 Shipping companies should establish and improve their risk classification management and control system, covering the entire process including risk identification, quantitative classification, prevention and control, early warning and forecasting, and emergency response. Regular risk identification should be conducted through systematic analysis of risk categories, probabilities, and severity levels from aspects such as personnel, ships, cargo, environment, and management, as well as critical areas, key time periods, and key operational links.

3.1.1.2 Companies should develop a ship-specific risk list, assess and determine risk levels, primary risk-inducing factors, and control scopes. Scientific control measures should be formulated, in which specific responsible departments and personnel for each measure should be clearly assigned, and

publicly announced internally.

3.1.1.3 Clear requirements for implementing and continuously improving risk prevention and control measures should be established. Companies should organize evaluations of the effectiveness of these measures and continuously refine the risk classification management and control process. The principal persons in charge should organize at least one annual effectiveness evaluation of the risk prevention and control work. For passenger transport and dangerous goods transport companies, such effectiveness evaluations should be conducted at least once every six months.

### 3.1.2 Establish and Implement the Voyage Safety Risk Assessment System

3.1.2.1 Shipping companies should establish a voyage safety risk assessment system to address navigational risks, enabling effective identification and control of potential risks during voyages, and to formulate and implement prevention and control measures. For ships on fixed routes, the assessment should focus on changes in meteorological conditions and navigational environment. A comprehensive assessment should be conducted where the crew change on a ship exceeds 25% .

3.1.2.2 Upon receiving voyage instructions from the shore-based department, the master should organize comprehensive collection of safety information for the upcoming voyage. Such information should include the characteristics of navigation, berthing, and operational areas, hydrometeorological conditions, and the navigational environment, covering key waters areas such as areas with dense fishing ships activities, congested waters , precautionary areas of TSS , fog areas, bridges, and narrow channels.

3.1.2.3 After collecting voyage safety information, the master should organize a voyage risk assessment to evaluate the risks and the potential consequences. Based on the assessment, a targeted "Voyage Plan" covering risk points, prevention/control measures, and emergency response procedures should be formulated. The master should sign to confirm the plan and submit it to the relevant shore-based department.

3.1.2.4 The responsible person of the shore-based department should review and approve the content of the "Voyage Plan." The master should then implement all pre-departure preparations in accordance with the shore-based approved plan, ensuring the adequacy of equipment and devices required for related risk prevention, control, and emergency response measures.

3.1.2.5 The relevant shore-based department should provide follow-up guidance, supervision, and inspection regarding the ship's risk assessment and the implementation of control measures, urging the ship to fulfill all requirements.

### 3.1.3 Establish and Implement the "Dual-Verification" System for High-Risk Operations

3.1.3.1 Shipping companies should establish a ship-and-shore "dual-verification" system for high-risk operations to address associated operational risks onboard. Preliminary review of high-risk operations should be conducted by the master and subsequently by the shore-based department. The supportive and managerial role of shore-based department should be fulfilled to ensure the effective implementation of relevant technical and operational requirements on board.

3.1.3.2 High-risk operations include: stowage, loading/unloading, and lashing/securing of cargoes such as steel products; hot work (e.g., welding and cutting) on board; tank washing, gas freeing, and cargo hold cleaning operations on ships carrying dangerous goods; loading/unloading of solid bulk cargoes that may liquefy and flammable/explosive cargoes; and crew entry into enclosed spaces for operations.

3.1.3.3 Prior to any high-risk operation, the master should conduct a risk assessment. Special safety measures should be formulated based on the ship's condition, hydrometeorological factors, and navigational conditions. The master should sign to confirm the assessment, which should then be submitted to the shore-based department on duty for review. High-risk operations performed as part of emergency response should be carried out in accordance with relevant regulations.

3.1.3.4 Shore-based personnel on duty should verify the comprehensiveness of the risk assessment and the feasibility of the safety measures, and notify the ship to proceed with the operation upon review and approval. If issues are identified during the review, immediate feedback should be provided to the ship along with rectification requirements. The operation is strictly prohibited until all rectifications are completed.

#### 3.1.4 Establish and Implement an Onshore Duty and On-Call System

3.1.4.1 Shipping companies should establish an onshore duty system for real-time remote monitoring and control of ships, ensuring that duty arrangements and remote management capacity are commensurate with the size and operational characteristics of the fleet, so as to achieve continuous, 24-hour

supervision and support for ships.

3.3.1.4.2 During adverse weather conditions such as typhoons and strong winds caused by cold waves, as well as during key periods including holidays, flood seasons, and summer seasons, onshore duty arrangements should be strengthened. Additional superintendents should be assigned to duty, and persons in charge should take the lead in duty shifts, so as to enhance decision-making and response capacity under complex conditions.

3.1.4.3 Shore-based duty personnel should be primarily responsible for the communication and coordination with internal departments, ships, and external parties. Routine duty tasks should include: collection and dissemination of safety information; monitoring and verification of ship movements; issuing navigation safety warnings and reminders; checks on crew members' performance of duties; provision of shore-based technical support; and emergency response and rescue coordination. From 22:00 to 05:00 the following day, checks on bridge watchkeeping arrangements should be conducted no less than twice. Clear requirements and frequencies for checks should be specified during daytime, and inspection records should be properly established and maintained.

3.1.4.4 Duty personnel should possess appropriate professional

qualifications and emergency response capabilities, and ensure 24-hour on-duty coverage. In the event of adverse weather such as typhoons and strong winds caused by cold waves, as well as during flood and summer seasons, duty personnel should comprehensively assess ship conditions, berth and terminal situations, and changes in typhoon tracks, and provide guidance to ships in implementing typhoon avoidance plans, while providing response recommendations.

3.1.4.5 Duty personnel should truthfully, comprehensively, and promptly record key duty activities, including ship dynamic monitoring, safety risk warnings, and initial emergency response actions, with duty logs maintained in chronological order.

## **3.2 Establish and Improve the Hazard Identification and Rectification Mechanism**

3.2.1 Establish and Implement a Regular Hazard Identification and Rectification System

3.2.1.1 Shipping companies should establish and improve a regular hazard identification and rectification system, specifying the responsible departments and personnel, scope, categories, procedures, frequency, statistical analysis, effect evaluation, and continuous improvement requirements for hazard identification

and rectification to promptly identify and eliminate hazards. Specifically, the principal persons in charge should lead at least one inspection every quarter, while for passenger transport and dangerous goods transport companies, such inspection should be conducted every month.

3.2.1.2 Improve the regular hazard identification mechanism for both shore-based and shipboard operations, covering potential safety hazards in mechanical and electrical equipment, critical operations, crew performance, and the implementation of safety management systems. For identified hazards, the requirements of "reporting - rectification - verification - close" should be strictly implemented.

3.2.1.3 Records and archives for hazard identification and rectification should be established, to truthfully record the process and results of identification and rectification. Companies are encouraged to develop and use information systems for risk and hazard identification and rectification. Detainable deficiencies found during ship safety inspections, major maritime administrative violations, and major non-conformities identified in monitoring inspections, internal audits, and external audits should be included in the record management.

3.2.1.4 Reward mechanism for employees who voluntarily

discover and report hazards should be improved.

### 3.2.2 Establish and Implement a Concentrated Identification and Rectification System for Major hazards

3.2.2.1 Shipping companies should establish a concentrated identification and rectification system for major hazards. The principal persons in charge should personally promote and plan concentrated identification and rectification actions for major hazards. Such actions should be conducted accordingly every year, before the Spring Festival travel rush and the holiday, as well as before the flood and summer seasons.

3.2.2.2 Group learning arrangements for all personnel should be enhanced to ensure that all staff understand the requirements of concentrated identification and rectification actions for major hazards, as well as the criteria or guidelines for identifying major accident hazards and prominent issues in the waterborne transportation sector.

3.2.2.3 Full-coverage self-inspection mechanism for both shore-based and shipboard operations should be improved. The principal persons in charge should lead at least one inspection for major hazards, and identified hazards should be rectified and closed immediately , and voluntarily submit reports on the

conduct of self-inspections and lists of risks and hazards to competent local authorities.

3.2.2.4 Shipping companies should establish records and archives for the rectification of major hazards, promptly adopt effective measures, and request verification of rectification and close by competent authorities. Hazards that cannot be rectified in the short term should be monitored by personnel designated by the company. Routes, projects, and ships that do not meet safe operation conditions should be suspended, closed down, or evacuated as appropriate.

## **4.Strengthen Safety Management During Key Periods**

### **4.1 Implement Rigorous Measures for Production Safety and Service Guarantee**

4.1.1 Companies should enhance passenger transport safety measures. Before the major holidays of Spring Festival, International Workers' Day, and National Day, passenger transport companies should conduct analysis and assumption of key passenger flows and formulate support plans in advance. During holidays, at least one person in charge should be on duty every day; for passenger ships navigating at night in congested waters, additional duty officers should be assigned, and ship schedules should be adjusted in a timely manner according to peak passenger flow conditions. During periods of sudden surges in passenger flow on inland rivers, reserve ships should be on standby for emergency response. Cruise shipping companies should establish a holiday joint working group with cruise port companies and shipping agencies to ensure sufficient support.

4.1.2 Shipping companies should strengthen the safety management of waterborne transport of dangerous goods. Before the holidays of Spring Festival, International Workers' Day and National Day, dangerous goods transport companies should

conduct a comprehensive self-inspection of production safety. During holidays, hot work on ships carrying liquid dangerous goods in bulk are prohibited in port waters during nighttime (from 22:00 to 05:00 the next day); bunker operations of ships are prohibited in congested inland waters during nighttime (from 22:00 to 05:00 the next day), and the navigation, berthing and unberthing operations of ships carrying Class X and high-risk Class Y chemicals in bulk are also prohibited.

4.1.3 Measures should be strengthened to ensure the smooth and uninterrupted waterborne transport of key commodities. Shipping companies engaged in the waterborne transport of key commodities such as LNG, coal and grain should develop arrangements to ensure transport continuity and efficiency, and should maintain timely communication and coordination with the competent transport authorities and maritime administrations.

4.1.4 Prevention and response to extreme weather should be enhanced. Shipping companies should collect meteorological early warning information and forward it to affected ships in a timely manner. Routes, projects, and ships that do not meet safe operation conditions should be suspended, closed down, or evacuated as appropriate.

## **4.2 Implement Upgraded Control Requirements for Major Hazard Sources**

4.2.1 During holidays of the Spring Festival, International Workers' Day, and National Day, shipping companies should, in accordance with the Detailed Measures for Upgraded Control of Major Hazard Sources in Transportation Work Safety During Holidays, implement upgraded control measures for major hazard sources, establish relevant records, break upgraded items down to specific ships and key operations, and specify the responsible departments and personnel.

4.2.2 For passenger ships in operation, such as ro-ro passenger ships, ferries, night tour ships, and tourist passenger ships, the upgraded control measures should include:

(1) Full-coverage inspection. Companies should conduct full-coverage self-inspections of passenger ships to be put into operation, rectify identified issues immediately, and prohibit the operation of ships with unrectified major hazards.

(2) Increase on-duty personnel. Companies should arrange at least one person in charge on duty every day; for passenger ships navigating at night in congested waters, additional duty officers should be assigned; for night tour ships with an operation time exceeding 4 hours, one dedicated lookout should be added to

strictly implement continuous lookout system.

4.2.3 For inland water passenger ships under strong wind warnings, the upgraded control measures should include:

(1) Under a blue warning of strong wind condition, the on-duty management personnel of the company should conduct on-site assessments of navigational condition before each voyage, implement measures such as information release, on-site inspections, alert and response mechanism. ships that do not meet safe operation conditions should be suspended as appropriate.

(2) Under a yellow or higher warning of strong wind conditions, companies should resolutely suspend all affected ships, including promptly arranging passenger ships to take shelter nearby, suspend navigation, or return to port.

4.2.4 For hot work on ships carrying dangerous goods in port waters, the upgraded control measures should include:

(1) Prohibition of operations. Hot work on ships carrying liquid dangerous goods in bulk are prohibited in port waters.

(2) Strengthen on-site control. For hot work on ships carrying other dangerous goods in port waters, the master or chief engineer should conduct on-site supervision throughout the operation.

4.2.5 For shipping companies with unrectified major hazards, the upgraded control measures should include:

Suspend ship navigation and operations. For ships with unrectified major hazards, measures such as suspending navigation, services, or operations should be implemented.

## **5. Strengthen Control of Major Safety Risks**

### **5.1 Enhance Adverse Weather Risk Prevention**

5.1.1 Shipping companies should firmly establish the concept of proactive defense, implement the requirements outlined in the Guidelines for Typhoon Prevention for Ships, Guidelines for Guarding Against Cold Wave and Strong Wind for Ships, and other relevant documents. Mechanisms for adverse weather prevention should be established and improved, specifying organizational structures, responsibilities, and operational procedures. The principal persons in charge of the company should be fully accountable for the planning, guidance, and supervision of ship adverse weather preparedness.

5.1.2 Shipping companies should strengthen the collection and dissemination of meteorological warnings, utilizing various channels such as specialized weather reception systems, official release platforms, and emergency contact groups to promptly obtain weather forecasts or warning information for adverse conditions including typhoons, cold waves, poor visibility, and adverse convection. Information on meteorological and sea conditions, navigation warnings, navigation restrictions and traffic control to ships should be transmitted accurately and

promptly via ship-shore communication systems.

5.1.3 Shipping companies should establish an adverse weather alert and response mechanism, defining the trigger conditions, methods, responsible personnel, feedback requirements, and time limits for the process. Companies should promptly confirm whether ships have received meteorological warnings and taken corresponding actions. ships should provide timely feedback on the implementation, to prevent ineffective information handling, including information being received without response or responses without implementation.

5.1.4 Shipping companies should develop emergency plans and conduct regular drills and exercises. Emergency plans should include content on organizational command structures, meteorological warning identification, information transmission and reporting, emergency response measures, contact persons, contact methods and etc..

5.1.5 Prior to adverse weather such as strong wind caused by cold waves or typhoons, ships should be required to conduct comprehensive self-inspections of equipment and devices. Such inspections should cover, but not be limited to, navigation, lifesaving, communication, mooring, propulsion equipment, and watertight integrity. Any issues identified during self-inspections

should be rectified immediately. The ship should report to the company for support, if shore-based assistance is required for rectification.

5.1.6 Upon receiving adverse weather warning information, the emergency plan should be promptly activated. The company should organize ship-shore joint assessments of the ship's capability to withstand adverse weather, reasonably develop or adjust voyage plans and port entry/exit schedules to avoid affected waters and time periods, and provide implementation guidance.

5.1.7 During adverse weather, shipping companies should strengthen duty and on-call system, continuously monitor ship and meteorological dynamics, supervise and guide ships in effectively implementing preventive measures, and provide adequate and effective shore-based support.

## **5.2 Enhance Prevention of Collisions Between Merchant ships and Fishing ships**

5.2.1 Shipping companies should, based on the Guidelines for the Prevention of Collisions Between Merchant ships and Fishing ships in China's Coastal Waters, improve operational instructions for preventing collisions between merchant and fishing ship in

SMS documents and internal management regulations.

5.2.2 Shipping companies should strengthen duty and on-call system, continuously monitor ship dynamics, and check the proper watchkeeping and lookout onboard, as required. When ships are navigating through congested waters or high-risk warning zones of collisions between merchant and fishing ships, additional navigational watch personnel should be assigned or the master should take command on the bridge.

5.2.3 Shipping companies should urge ships to enhance pre-departure safety reminders onboard. Pre-voyage safety meetings should be conducted before every voyage. All crew members forming navigational watch should be organized to learn about the characteristics of waters with dense fishing ships activities, assess collision risks, and formulate measures for avoiding fishing ships.

5.2.4 Shipping companies should urge ships to strengthen watchkeeping and lookout while navigating in China's coastal waters, ensuring early detection, early communication, and early action to avoid fishing ships. The minimum distance of CPA in open waters should be no less than 1 nautical mile (and no less than 0.5 nautical mile in high-risk merchant and fishing ships collision warning zones, as far as practicable).

### **5.3 Strengthen Prevention of Passenger ship and Ferry Accident Risks**

5.3.1 Shipping companies should pay close attention to weather changes, enhance channels for obtaining short-term and imminent meteorological information, promptly conduct analysis and assumption, and disseminate extreme weather warnings. Companies should strictly implement the management requirements regarding navigation restrictions and traffic control for passenger ships under adverse weather conditions. Illegal activities such as overloading, reckless navigation, and operating beyond approved routes for passenger ships and ferries are prohibited.

5.3.2 Shipping companies should improve standards and procedures for responding to adverse weather warnings and for suspending or returning to port of passenger ships and ferries. Implement the alert and response mechanism. ships that do not meet safe operation conditions should be suspended as appropriate.

5.3.3 Shipping companies should urge crew members to closely monitor meteorological, hydrological, and navigation conditions, strictly comply with COLREGS and navigation rules, guide crew

members to properly use navigational aids such as AIS, CCTV, and VHF, and to strengthen watchkeeping and lookout.

5.3.4 In principle, new energy vehicles should be transported on dedicated ships, by dedicated service, and the vehicles and passengers should be transported separately. If not possible, dedicated parking zones for new energy vehicles should be established following a safety assessment, and maintaining safe parking distances.

5.3.5 Identification and rectification of hazards related to ship electrical equipment and firefighting facilities should be enhanced. Fire hazards such as electrical equipment faults, aging wiring, and short circuits should be addressed promptly.

5.3.6 Special attention should be paid to the safety of power systems on battery-powered ships. Shipping companies should study and implement specialized protective measures in consultation with battery manufacturers, increase the frequency of hazard identification, promptly handle and report health monitoring alarms from battery power systems, and organize professionals to conduct regular battery health monitoring.

5.3.7 Requirements of the catalogue of items prohibited or restricted from carriage or check-in by waterborne transport passengers should be strictly enforced, in cooperation with

relevant authorities. Inspections of dangerous goods and vehicles on ro-ro passenger ships should be enhanced to prevent passengers from illegally carrying flammable or explosive items.

5.3.8 Shipping companies should urge crew members to study and implement the Code of Conduct for Crew on Passenger Ships, standardize navigation operations. Unsafe behaviors by crew on duty, such as the improper use of electronic devices , drunk and fatigued navigation, should be prohibited. Companies should enhance warning education regarding typical unsafe behaviors to guide crew in developing good practices.

5.3.9 Shipping companies should establish operational management measures for passenger ship intelligent monitoring and management systems, specifying inspection frequency of equipment, responsible personnel, and specific inspection content. Companies should deploy monitoring personnel commensurate with the scale of passenger ship operations, the number of routes, and the coverage of monitoring equipment. Handling of system alarms should be enhanced and unsafe navigation practices should be handled promptly.

5.3.10 Shipping companies should improve emergency plans for scenarios such as firefighting, lifesaving, and abandon ship. Large-scale lifesaving drills and exercises for cruise ships and

large passenger ships should be conducted to enhance crew's capabilities of emergency response. Onboard safety publicity and education for passengers should be enhanced. Key emergency escape knowledge and lifejacket donning instructions should be explained to passengers before every voyage.

#### **5.4 Enhance Risk Prevention for Ships Carrying Dangerous Goods**

5.4.1 Shipping companies should hold corresponding qualifications, strictly fulfil their responsibility to verify cargo information and rigorously prevent misdeclaration or non-declaration by shippers. All declarations for the entry to, departure from ports, or ship-to-ship transfer of dangerous goods should be submitted as required. The transport of highly toxic chemicals and other state-prohibited dangerous chemicals via inland waterways is prohibited.

5.4.2 Shipping companies should standardize the stowage, segregation, and transport of dangerous goods. Stowage plans should be developed based on the specific characteristics of the cargo and the voyage profile, and ships should strictly comply with all applicable requirements for the segregation and carriage of dangerous goods.

5.4.3 Shipping companies should strengthen the maintenance of key shipboard systems and equipment, such as liquid cargo systems and firefighting systems. The ship/shore safety checklist system should be implemented to ensure thorough self-inspections to identify and correct hazards.

5.4.4 Shipping companies should establish operational management systems for the smart monitoring of dangerous goods carriers, specifying the inspection frequencies, responsible personnel, and specific inspection items. Monitoring personnel should be designated commensurate with the scale of dangerous goods ship operations, the number of routes, and the coverage of monitoring equipment. System alerts should be promptly addressed, and unsafe navigation practices corrected without delay.

5.4.5 Shipping companies should enhance the training and assessment of crew members' safety knowledge and operational skills, with focus on the Code of Conduct for Seafarers on Ships Carrying Dangerous Goods. Ships should be urged to conduct regular onboard training for crew on critical operations, including dangerous cargo handling and hot work, to ensure competency and regulatory compliance.

5.4.6 Based on the hazardous properties and the needs of

necessary emergency response measures, specific emergency plans for dangerous goods incidents should be developed, and emergency equipment and appliances should be equipped accordingly. Emergency drills for dangerous goods leakage, fires and explosion should be conducted to enhance emergency response capabilities.

## **5.5 Enhance Risk Prevention for Ship-Bridge Collisions**

5.5.1 Shipping companies should establish safe navigation arrangements for the ships transiting waters in the vicinity of bridges, proactively collect information on bridge clearance dimensions and anti-collision capabilities, and promptly communicate such information to ships, and define operational procedures for ships navigation in such waters.

5.5.2 Shipping companies should strengthen the maintenance of navigational equipment and ensure that key systems, such as the ship's main propulsion system, steering gear, and main and emergency power supplies, are in good technical condition prior to entering bridge waters. Companies should urge ships to refrain from improper practices in bridge waters, including drifting, turning around, crossing fairways, deviating from designated fairways, exceeding bridge clearance limits, and failing to

maintain a proper lookout.

5.5.3 Shipping companies should enhance the management of ships and crew, strengthen safety education and training, and ensure that crew members are familiar with the navigation conditions and requirements applicable to bridge waters, including hydrometeorological conditions, bridge clearances, navigation rules, and essential collision-avoidance manoeuvres.

5.5.4 Shipping companies should develop emergency response plans for ship–bridge collisions. Regular emergency drills should be conducted to ensure that crew members are familiar with emergency procedures and capable of responding effectively.

## **5.6 Enhance Risk Prevention for Machinery and Electrical Equipment Failures**

5.6.1 Shipping companies should, in accordance with the manufacturers' instructions, establish and implement maintenance arrangements and operational procedures for key machinery and electrical equipment, including main engines, steering gears, and auxiliary engines.

5.6.2 In accordance with the Special Self-Inspection Guidelines for Preventing Ship Machinery and Electrical Failures, shipping companies should strengthen shore-based monitoring and

onboard inspections of the maintenance status of machinery and electrical equipment. Ships should be guided to conduct pre-voyage self-inspections and to promptly rectify any issues or hazards identified.

5.6.3 Ships should be urged to enhance their pre-voyage self-inspections, with particular focus on the condition of machinery/electrical equipment (i.e. main propulsion plant, steering gear, main power source, etc.) and life-saving appliances. Any identified failures or hazards in machinery/electrical equipment should be rectified promptly. Ships with unresolved rectifications are not permitted to depart.

5.6.4 Shipping companies should prioritize the review of accident and emergency cases to draw lessons and insights. Targeted training programmes should be developed based on different types of shipboard equipment, focusing on the familiarization, maintenance, and operation of high-frequency failure equipment such as main engines, auxiliary engines, and steering gear. Skill assessment and pre-assignment education/training for newly hired and reassigned crew members should be strengthened. Emergency drills for ship loss of control due to machinery failure should be conducted regularly in order to enhance crew members' contingency response and handling capabilities.



## **6. Enhance the Inherent Safety Level of Ships**

### **6.1 Improve the Safety Performance of Newly Built Ships**

6.1.1 Shipping companies should prioritize the selection of safe, reliable, intelligent, and efficient design ship types. Measures such as optimizing ship structure, increasing the redundancy of key systems, and selecting high-reliability equipment should be implemented to ensure the inherent safety of ships.

6.1.2 Shipping companies should prioritize selecting shipbuilding companies with appropriate qualifications, robust technical capacities, and a well-established quality management system for ship construction. Newly constructed ships should pass the survey conducted by a recognized classification society or administration and obtain the required certificates.

### **6.2 Maintain Ships in Sound Technical Condition**

6.2.1 Shipping companies should establish a systematic maintenance arrangement for key equipment, develop annual and monthly maintenance plans, and conduct regular maintenance and testing of key equipment onboard to ensure proper operation. All maintenance and testing activities should be properly recorded and signed off by responsible personnel.

6.2.2 The shore-based management should conduct follow-up inspections on the maintenance status of equipment through methods such as informational monitoring and periodic checks onboard. Any issues identified should be promptly addressed, and rectification should be duly followed up.

6.2.3 For companies engaged in the waterborne transport of general cargo, the interval between onboard inspections conducted by superintendents should not exceed 6 months. For companies engaged in waterborne passenger transport and dangerous goods transport, this inspection interval should not exceed 3 months.

### **6.3 Accelerate the Renewal of Ageing Ships**

6.3.1 Shipping companies should accelerate the fleet renewal process by phasing out ageing ships that are energy-intensive, high-emission, or have prominent safety hazards in an orderly manner, upgrade their fleets with new green and intelligent ships that meet the requirements of modern shipping.

6.3.2 Shipping companies engaged in inland waterway passenger transport and dangerous goods transport should accelerate the phase-out and renewal of existing passenger ships and dangerous chemical transport ships with poor safety conditions, so as to

prevent major and catastrophic accidents.

#### **6.4 Promote the Application of New Technologies**

6.4.1 Shipping companies should actively promote and apply digital safety management systems, leverage the effectiveness of digital management to standardize and strengthen internal safety management and the operation of SMS.

6.4.2 Shipping companies should fully advance the application and upgrading of intelligent ship technologies. Shore-based monitoring systems should be continuously upgraded to enhance remote situational awareness and control capabilities through visualized and intelligent systems and platforms. Intelligent monitoring systems should be installed on ships engaged in coastal voyages.

6.4.3 Shipping companies should accelerate the application of technologies such as big data and the Internet of Things to enable real-time monitoring of ship operating conditions and early warning of risks, thereby improving the efficiency and precision of safety management.

## **7. Enhance the Competence of Shore-based and Shipboard Personnel**

### **7.1 Strengthening Crew Workforce Development**

7.1.1 Shipping companies should formulate crew workforce development plans according to operational needs, implement full life-cycle management covering recruitment, transfer, training, incentive mechanisms, and exit of crew members. A comprehensive annual assessment of the company's crew workforce should be conducted at least once per year.

7.1.2 Shipping companies should increase the investment in crew training to enhance their competence and professionalism, and to promote a stable and healthy development of the crew workforce. For company-owned passenger ships and dangerous goods in bulk carriers, the proportion of company-employed senior crew members should not be less than 75%, with at least one company-employed master or two company-employed management-level officers on each ship. For general cargo ships, the proportion of company-employed senior officers should not be less than 25%, with at least one company-employed management-level officer on each ship. The proportion of company-employed crew members should be progressively increased.

## **7.2 Standardize Crew Performance of Duties**

7.2.1 Shipping companies should implement relevant regulations including the Code of Conduct for Crew on Passenger Ships and the Code of Conduct for Crew on Ships Carrying Dangerous Goods, take effective measures and provide sufficient support to ensure crew performance complies with these standards.

7.2.2 In accordance with the Operational Guide on the Mental and Physical Well-being of Seafarers, close attention should be paid to the physical and psychological condition, as well as the behavioural practices, of crew members. A pre-duty fitness check system should be established and implemented. Crew members who are psychologically or medically unfit for duty are strictly prohibited from assuming their posts. Crew members are strictly prohibited from participating in watchkeeping duties while under the influence of alcohol, watchkeeping-impairing medication, or drugs.

7.2.3 Shipping companies should strengthen the monitoring of crew onboard performance. Crew members should be prohibited from using mobile phones or other electronic entertainment devices for non-duty purposes while on duty, in order to prevent accidents caused by abnormal or unsafe crew behaviour.

### **7.3 Conduct Safety Education and Training for All Personnel**

7.3.1 Shipping companies should establish and implement a work safety education and training system for all personnel, including a training system and annual training plan applicable to all employees, and conduct safety education and training at different levels through multiple channels, so as to effectively improve the overall safety and pollution prevention skills.

7.3.2 Shipping companies should organize regular specialized training on typical waterborne accident cases, analyzing the causes of accidents and interpreting relevant international conventions, national laws and regulations, and industry standards by referring to the corresponding safety management recommendations, to ensure that all personnel thoroughly learn from the accidents.

7.3.3 The initial safety training for newly hired shore-based management personnel should not be less than 48 training hours. The annual on-the-job safety education and training for the principal persons in charge of the companies and shore-based management personnel should not be less than 16 training hours. Companies should strengthen the pre-job training for crews, which should not be less than 24 training hours, including no less

than 20 of shore-based training and no less than 4 of on-board training. The pre-job training for newly hired masters and navigational officers should not be less than 28 training hours. For newly hired crews on passenger ships and ships carrying dangerous goods, the pre-job training should not be less than 72 training hours. The drills of the crew should take place within 24h of the ship leaving a port if more than 25% of the crew have not participated in abandon ship and fire drills on board that particular ship in the previous month.

#### **7.4 Improve the Assessment and Evaluation Mechanism**

7.4.1 Shipping companies should establish and improve a pre-assignment competency assessment mechanism for all personnel. A comprehensive assessment of the competency of newly hired, transferred and promoted personnel, especially crew members, should be conducted, and only those who pass the assessment can be allowed to take up their posts.

7.4.2 Companies should improve the daily assessment and evaluation system for all personnel. On the basis of clarifying the assessment standards, regular assessments of shore-based personnel and crews should be implemented in combination with their work achievements and performance. The assessment

results should serve as the basis for employment, promotion, rewards and punishments.

7.4.3 For the crews who are responsible for causing accidents and near-miss incidents, their competency should be re-assessed, and effective measures should be taken in accordance with the re-assessment results.

## **8 Enhance Emergency Response and Disposal Capabilities**

### **8.1 Improve the Emergency Response Mechanism**

8.1.1 Shipping companies should, based on the characteristics of the managed ships, navigation environment, and adverse weather conditions, focus on establishing and improving emergency plans for fires, personnel falling overboard, collisions, loss of control, grounding and other emergencies, to ensure that communication between shore and ship is smooth and all emergency preparations are in place when ships encounter accidents and near-miss incidents.

8.1.2 In the event of emergencies such as loss of control or collision during navigation, the shore-based should promptly provide guidance and assistance for the ship's self-rescue, implement on-site emergency response in accordance with the requirements of the competent authority, improve the efficiency of emergency rescue, and minimize losses to the greatest extent.

### **8.2 Improve Emergency Disposal Capabilities**

8.2.1 Shipping companies should integrate and optimize internal emergency resources, and allocate sufficient emergency supplies and equipment as required. Personnel should be arranged to

conduct regular inspection, testing and maintenance of the equipment to ensure that emergency rescue equipment is in good condition.

8.2.2 Shipping companies should strengthen the development of prompt rescue capabilities, assess the self-rescue capabilities under various emergency scenarios, and improve the rescue efficiency under adverse weather and other harsh conditions.

### **8.3 Conduct Regular Emergency Drills**

8.3.1 Shipping companies should formulate an annual drill and training plan and conduct ship-shore emergency drills and exercises in accordance with the plan.

8.3.2 Companies should strengthen ship-shore joint emergency drills, and conduct at least twice a year covering all types of ships. All emergency scenarios should be covered by joint ship-shore emergency drills within five years.

8.3.3 Shipping companies should strengthen on-board emergency drills, covering all emergency scenarios within two years. The frequency of on-board drills such as fire fighting, life saving and oil spill should comply with regulations as required.

8.3.4 Superintendents should conduct on-site guidance for on-board emergency drills at least once a year to enhance emergency

response and rescue capabilities.

#### **8.4 Report Accidents and Near-miss Incidents in a Timely Manner**

8.4.1 Shipping companies should strictly comply with the relevant accident reporting regulations. Accidents should be reported to the competent authorities in a timely, complete, and objective manner, in accordance with the specified requirements on time limit, content, method, and recipient. Concealment, false reporting, or delayed reporting is prohibited.

8.4.2 Upon receiving an accident report, companies should promptly activate the emergency plan, take effective measures to organize rescue work, and prevent the expansion of the accident.

