



İPRAGAZ DÖRTYOL TERMINAL DANGEROUS GOODS SAFETY GUIDE



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1 ENTRY

1.1. The entry and presence of dangerous cargoes in port areas and any consequential handling should be controlled to ensure the general safety and security of the area, the containment of the cargoes, the safety of all persons in or near the port area, and the protection of the environment.

1.2. The safety of life at sea and the safety and security of a ship, its cargo and its crew in a port area are directly related to the care which is taken with dangerous cargoes prior to loading or unloading, and during their handling.

1.3. These Recommendations are confined to dangerous cargoes which are in a port area as part of the transport chain. These Recommendations do not apply to dangerous substances which are used in a port area or are for general storage in the port area, but Governments may wish to control such use and storage by national legal requirements. Should a substance covered by either of these exclusions subsequently be shipped, these Recommendations should then be applied, even though the substance is already in the port area.


1.4. An essential pre-requisite for the safe transport and handling of dangerous cargoes is their proper identification, containment, packaging, packing, securing, marking, labelling, placarding and documentation. This applies whether the operation takes place in a port area or at premises away from a port area.

1.5. Whilst the total transport chain includes inland, port and marine elements, it is essential that every care is taken by those responsible for the matters in 1.4 and that all relevant information is passed to those involved in the transport chain and to the final consignee. Attention should be paid to the possible differing requirements for different modes of transport.


1.6. The safe transport and handling of dangerous cargoes is based on correct and accurate application of regulations for transport and handling of such cargoes and depends on appreciation by all persons concerned of the risks involved and on the full and detailed understanding of the regulations. This can only be achieved by properly planned and carried out training and retraining of persons concerned.


1.7. The codes and guides are under continuous review and are regularly revised. It is essential that only the most up-to-date editions are used. The contents of these codes and guides have been repeated in these Recommendations only to the extent necessary.

1.8. In preparing this guide IMDG CODE, ERG 2016 and IMO 1216 CR. documents have been applied to and the informations are used.

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1.1 General information of the port facility (Restricted)

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1.2 Loading/unloading, handling and storage procedures for dangerous cargoes handled and temporarily stored at the port facility

1.2.1 General

1.2.1.1 Liquid cargoes (Flammable Gases class 2.1) Hydrocarbon Gas Mixture (UN 1965) within the scope of IBC code are handled at the port facility within the scope of IBC code.

1.2.1.2 Fulfillment of the conditions specified below will be ensured as regards handling the dangerous cargoes coming to the port facility, keeping them temporarily at the port facility, making their stowage and segregation and storage for safety of the port facility, employees and ships at the port facility.

1.2.1.2.1 In case of need A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility and the representatives of operation, Field planning, HSE unit, TMGD and other related persons shall participate to the meeting.


1.2.1.2.2 Following issues will be discussed during the coordination meeting with regard to the dangerous cargo (es) to be accepted to the port:

1. Risk arising from dangerous cargo
2. Interaction with dangerous cargoes existing at the port facility,
3. Interaction with cargoes planned to be accepted to the port facility in the near future,
4. Requirement of materials and equipment with respect to emergency response
5. Sufficiency of emergency response equipments
6. Interaction with the neighboring area (s)

The issues mentioned herein above will be discussed within the scope of current IMDG CODE documents and a management decision for accepting/rejecting will be taken.

1.2.1.2.3 If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced.

1.2.1.2.4 If it is required to notify the Port authority, the situation shall be notified to the Port authority in writing by specifying the reasons.

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1.3 Procedures for safe handling of liquid bulk dangerous cargoes

1.3.1 Application

1.3.1.1 Liquid bulk dangerous cargoes are handled at buoy system within our port facility.

1.3.1.2 The equipment, number of shifts and team are determined during the operations meeting held one day before. SDS of the cargo in ship notification is provided to HSE unit by the agency 3 days before.

1.3.1.3 After the ship is safely tied to buoy system by the help of pilot and mooring boat, safety investigation is carried out on the ship. If any unsafe situations are observed, notifications are made to the persons responsible for the ship and measures are taken accordingly. Unloading equipment and appropriate pipe selection are made by the person responsible with operations. International Safety Guide for Oil Tankers and Terminals (ISGOTT) Ship/Port Safety Control List is undersigned mutually. A communication network is built between the ship and the port facility.

1.3.1.4 Employees wait beside the flexible hoses which will be connected to the ship. They work in cooperation with the ship personnel for the connection of liquid cargo to entry/exit manifolds of the ship.

1.3.1.5 Appropriate pressure adjustment is made to the ship. Overflow of tanks is avoided and the ship personnel are provided with required information and the line is cut under dangerous situations.


1.3.2 Requirements

1.3.2.1 Gas detectors which will detect gas leakages to occur at the port facility will be kept ready being calibrated and made ready to use.

1.3.2.2 The vehicles coming to the loading or unloading platform at the port facility will be eliminated from static electricity, flame arrestor apparatus will be placed at their exhausts and their earthing shall be made during the loading or unloading at the port facility. Flame arrestor apparatus will be provided by the Ground Tanker Operations Unit. Ground tankers which don't have flame arrestors shall not be taken to the port facility. This will not be required for tankers having ADR standards.

1.3.2.3 Required notices and warning signs will be placed around the area where handling is done. Related personnel will wear personal protective clothing and outfit in accordance with work health and safety requirements at dangerous places and under dangerous conditions. Personnel who don't have protective clothing and adequate equipment in line with their job descriptions and their working areas will not be employed.

1.3.2.4 Periodic repair/maintenance and calibration works of devices to be used will be made and certificates, journals or ledgers of records will be kept updated.

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1.3.2.5 First aid equipments to be used during intervention will be placed at a place known by the personnel which is easily accessible in case of emergency or accidents.

1.3.2.6 Communication equipments to be used at the port facility will be wireless equipments which can be used safely during loading or unloading operations of liquid bulk dangerous cargoes in flammable or explosive environments.

1.3.2.7 Flexible hoses used in loading or unloading of liquid bulk dangerous cargoes should have a certificate specifying the approval of type as well as pipe type, maximum working pressure of the pipe and production month and year of the pipe. Repair and maintenance works and testing of the said pipes will be carried out as per the criteria stated in ISGOTT and relevant records shall be kept. Hoses to be used in loading or unloading operations which are not in service will be kept according to the criteria specified by ISGOTT.

1.3.2.8 Adequate number of electrical insulation flanges for the flexible hoses used in loading or unloading operations of liquid bulk dangerous cargoes.

1.3.2.9 The operators of port facility where liquid bulk dangerous cargoes are handled are responsible of notifying issues as regards additional safety and safety measures which have to be taken at port facility to liquid cargo foreman, superintendent, supervisor and workers.

1.3.2.10 Liquid cargo foreman, superintendent and supervisor are responsible from handling of liquid bulk cargoes at our port facility and their duties are specified in quality management system and they will act in accordance with the said quality management system.

1.3.2.11 The master of a ship and the liquid cargo foreman, within their respective areas of responsibility, should have immediately make available the following information with respect to each liquid bulk cargo transported in cargo operations and emergency cases to the port authority and other involved parties:

1.3.2.11.1 Information to be provided by the ship master;


1.3.2.11.1.1 The product name of the dangerous cargo, the UN number (where available) and a description of the relevant physical and chemical properties (including reactivity).

1.3.2.11.1.2 Procedures for cargo transfer, slop transfer, gas-freeing, inerting, ballasting, de-ballasting and tank cleaning.

1.3.2.11.2 Information to be provided by liquid cargo foreman, superintendent and supervisor;

1.3.2.11.2.1 Information as to specific equipment required for safe handling and loading or unloading of certain cargoes and emergency response procedures including the following issues:

1) Steps to be taken in cases of pouring or leakage as specified in Emergency Plans,

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2) Measures to be taken to avoid people from contacting dangerous cargoes accidentally within the scope of Emergency Plan and Work Health and Security,

3) Fire fighting procedures as specified in Emergency Plan and the appropriate communication systems to be used in cases of fire.

1.3.2.12 It should be ensured that, before and during handling and loading or unloading operations of liquid bulk dangerous cargoes at any area, appropriate warning notices, preferably pictograms, are placed at all entrances.

1.3.2.13 Continuous communication will be ensured during the handling and loading or unloading of dangerous liquid bulk cargos, through Sea Band Channel 16 and from the work channel specified in the protocol and effectiveness of communication will be ensured during the cargo operations.

1.3.3 Pipe installations used for liquid bulk dangerous cargoes

1.3.3.1 Flexible hoses:

1.3.3.1.1 Flexible hoses will be used for cargo by considering the temperature and suitability and not be used for other than these cargoes.

1.3.3.1.2 If they are prone to be damaged by impact they will be protected accordingly.

1.3.3.1.3 The pipe will be electrically continuous except for the inclusion of an insulating flange or non-conductive spool piece when used for the transfer of a flammable liquid. The pipeline on the seaward side of the insulating section should be electrically continuous to the ship, and that on the landward side should be electrically continuous to the jetty earthing system. The insulating flange should be tested in accordance with chapter 17 of ISGOTT.

1.3.4 The liquid cargo foreman will do the following:

1.3.4.1 He will take adequate precautions are taken to prevent a short-circuit of the insulating section


1.3.4.2 He will inspect and test the insulating and earthing systems at appropriate intervals to ensure their effectiveness.

1.3.4.3 He will ensure that any other metallic connections between the berth and the ship are protected or arranged so as to ensure that there is no possibility of incentive sparking where a flammable atmosphere may be present.

1.3.4.4 He will take actions in accordance with appropriate checklists in the International Safety Guide for Oil Tankers and Terminals (ISGOTT).

1.3.5 Sources of ignition

1.3.5.1 Liquid cargo foreman should ensure that the master of a ship is notified of any conditions which may require precautions to be taken for avoidance of sources of ignition on the ship such as galley stoves or cooking appliances with non-immersed elements.

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1.3.6 Handling

1.3.6.1 Flexible hoses

1.3.6.1.1 The master of a ship and the person responsible with operation within their respective areas of responsibility should ensure that:

1. No Flexible hose is used for cargoes other than those for which it is suitable, having regard to the temperature and compatibility of such cargoes, or at any working pressure for which it is unsuitable.
2. Each type of Flexible hose complete with end fittings has been prototype tested and a certificate provided to show the bursting pressure. Prototype hoses may not be used in service.
3. Before being placed in service, each Flexible hose supplied should be hydraulically tested in accordance with the requirements of the regulatory authority
4. Before being put into use on any day a Flexible hose is visually inspected. Flexible hoses should be inspected at frequent intervals during operations.
5. Documents showing the type of hose, its specified maximum working pressure and its month and year of manufacture will be kept at the facility.
6. It will be ensured that there are adequate electrical insulation flanges and the length of each Flexible hose is sufficient to satisfactorily operate within the defined operating envelope without overstressing the terminal connections
7. A Flexible hose rigged for the handling of liquid bulk dangerous cargoes is kept under adequate supervision
8. It will be ensured that there are adequate procedures for the disconnection of the Flexible hose in the event of an emergency, to protect the environment, personnel safety and equipment.

1.3.7 Preliminary precautions

1.3.7.1 The master of a ship and berth operator within their respective areas of responsibility, should ensure that cargo handling controls, gauging systems, emergency shutdown and alarm systems, where applicable, have been tested and found to be satisfactory before cargo handling operation begins


1.3.7.2 The master of a ship and berth operator should before liquid bulk dangerous cargoes are pumped into or out of a ship from or into a shore installation agree in writing on the handling procedures including the maximum loading or unloading rates taking into account:

1.3.7.2.1 The arrangement, capacity and maximum allowable pressure of the ship's cargo lines and the shore pipelines;

1.3.7.2.2 The arrangement and capacity of the vapor venting system;

1.3.7.2.3 The possible pressures increase due to emergency shut-down procedures;

1.3.7.2.4 The possible accumulation of electrostatic charge; and

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1.3.7.2.5 The presence of responsible persons during start up operations on board ship and ashore

1.3.7.3 Complete and sign an appropriate safety check list showing the main safety precautions to be taken before and during such handling operations

1.3.7.4 Agree in writing the action to be taken and the signals to be used in the event of an emergency during handling operations; and

1.3.7.5 Ensure appropriate safety equipment and clothing are used.

1.3.7.6 The berth operator should ensure that starter controls on all bulk liquid transfer pumps are locked in the “off” position, or located at a facility accessible only to authorized personnel

1.3.7.7 The berth operator should ensure that starter controls on all bulk liquid transfer pumps are locked in the “off” position, or located at a facility accessible only to authorized personnel.

1.3.7.8 “Ship/Shore Safety checklist” in International Safety Guide for Oil Tankers and Terminals (ISGOTT) shall be completed and signed according to “Guidelines for completing Ship/ Shore Safety checklist”.

1.3.8 Pumping

1.3.8.1 The master of a ship and berth operator within their respective areas of responsibility should ensure that:

1.3.8.1.1 Frequent checks are made to ensure that the agreed back-pressures and loading or unloading rates are not exceeded;

1.3.8.1.2 All reasonable care is taken to prevent all relevant pipelines, loading arms, Flexible hoses and associated equipment on board the ship and ashore from developing a leak, and that they are kept under adequate supervision during the handling of liquid bulk dangerous cargoes;


1.3.8.1.3 Effective communication between the ship and the shore installations is maintained throughout the handling operations;

1.3.8.1.4 The safety check list is available for inspection throughout the handling operations;

1.3.8.1.5 During the handling of liquid bulk dangerous cargoes, arrangements are made for the gauging of ships’ tanks to ensure that no tank is overfilled;

1.3.8.1.6 Responsible persons are present during operations on board ship and ashore; and

1.5.9.1.7 Appropriate safety equipment and clothing are used.

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1.3.9 Completion of operation

1.3.9.1 The master of a ship and berth operator within their respective areas of responsibility should ensure that after the completion of every transfer of liquid bulk dangerous cargoes the valves of the discharging and receiving cargo spaces and tanks are closed and any residual pressure in the relevant pipelines and Flexible hoses is released, They should also ensure that:

1.3.9.1.1 Prior to the disconnection of the flexible pipelines from the ship it is drained of liquids and the pressure is relieved;

1.3.9.1.2 All safety precautions are taken, including the blanking off of the ship manifold connection and the shore pipeline; and

1.3.9.1.3 Appropriate safety equipment and clothing are used.

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2 RESPONSIBILITIES

All parties within the dangerous goods transportation activities are obliged to take all necessary measures to transport safely, securely and environmentally friendly, to avoid accidents and to reduce the damage as little as possible, if an accident occurs.

2.1 Responsibilities of the relevant person of the goods

2.1.1 To prepare all necessary documents, information and certificates relating to dangerous goods and provide availability of these documents with the cargo during the transport activities.

2.1.2 Ensure the proper classification, identification, packing, marking and plating of the dangerous goods in accordance with the legislation.

2.1.3 Ensure safe loading, stowage, transport and unloading of dangerous goods in approved and proper package, container and cargo units.

2.1.4 Ensure the training of all relevant personnel on marine risks of dangerous cargo, safety precautions, safe operation, emergency measures, safety and so on and keep training records.

2.1.5 Provide necessary safety measures for improper, unsafe or risk-posing hazardous substances.

2.1.6 Provide the necessary support and information to the relevant persons in case of emergency or accident.

2.1.7 Inform the administration on dangerous goods accidents occurred in the area of responsibility.

2.1.8 Present the requested information and document in the inspections carried out by the Authorities and provide the necessary cooperation.

2.2 Responsibilities of the port facility operator

2.2.1 Ensure appropriate, secured, safely land and connection.

2.2.2 Ensure proper and safe entrance-exit system between the ship and shore.

2.2.3 Provide training for personnel working in loading, unloading and handling operations of the dangerous goods.


2.2.4 Ensure proper and safe transport, handling, separation, stowing, temporary stock and inspection of the dangerous goods in the operation field by qualified, trained personnel who has taken the job security measures.

2.2.5 Request all necessary documents relating to dangerous goods from the relevant person of the cargo and ensure its availability with the cargo.

2.2.6 Keep an updated list of all dangerous goods in the business field.

2.2.7 Provide training for all personnel on the risk of handled dangerous goods, safety measures, safe operation, emergency measures, safety and so on and keep training records.

2.2.8 Check the documents regarding to appropriate identification of hazardous substances delivered to the facility, correct use of shipping names of dangerous cargo, certification, packaging, labeling and declaration, inspection on loading and transport of dangerous goods in the certified and proper package, container or cargo unit in a safety way and reporting of inspection results.

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2.2.9 Provide necessary safety measures for improper, unsafe or risk-posing hazardous substances and notify the port authority.

2.2.10 Provide emergency arrangements and ensure that all persons informed about these issues.

2.2.11 Inform the port authority on the dangerous goods accidents occurring in the area of responsibility.

2.2.12 Provide necessary support and cooperation for the inspections made by the authorities.

2.2.13 Execute the activities related to hazardous substances in the docks, wharves, warehouses which are established for this purpose.

2.2.14 Provide proper installation and equipping for the docks and wharves separated for ships and marine vessels which load and unload petroleum and petroleum products.

2.2.15 Provide transportation of the dangerous goods, which are not proper for temporary stay and not allowed, out of the port facility as soon as possible without waiting.

2.2.16 Not allow the ships and vessels carrying hazardous goods to edge in with the dock and pier without permission from the port authority.

2.2.17 Provide a storage area proper to separation and stowage requirements and take necessary fire, environmental and other safety measures. Load and unload the dangerous good to ships and vessels, to take necessary actions against heat and other hazard especially in warmer seasons by relevant person. Keep combustible materials away from sparks and avoid usage of sparkling tools and equipment in the dangerous goods handling area.

2.2.18 Prepare emergency evacuation plan for the evacuation of the ships and boats from the port facilities in case of emergency.

2.3 Responsibilities of the ship's master

2.3.1 Ensure that the ship, equipment and devices are in good condition for dangerous good transport.

2.3.2 Demand all necessary documents, information and certification relating to dangerous goods and ensure their availability with the goods..


2.3.3 Ensure that the safety measures related to loading, stowing, separating, handling, transport and unloading of the dangerous goods in his ship and take necessary inspection and controls.

2.3.4 Check the compliance of identification, classification, certification, packaging, marking, declaration, loading and transport of the approved and proper package, container and cargo unit in a safety means.

2.3.5 Ensure that the crew is trained and informed on the risks, safety precautions, safe operation, emergency measures and similar issues of the loaded and unloaded dangerous goods.

2.3.6 Ensure that the persons, who are qualified and have necessary training on the loading, transport, unloading and handling of the dangerous goods, work by taking job safety measures.

2.3.7 Not crossing the boards assigned to himself, not anchoring, not edging with the pier and docking without the consent of the port authority.

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2.3.8 Apply all rules and measures during sailing, maneuvering, mooring, berthing and leaving for the safe transport of dangerous goods..

2.3.9 Ensure safe entry and exit between the ship and the dock..

2.3.10 Inform the crew on the applications, security procedures, emergency measures and intervention methods related to dangerous goods in the ship..

2.3.11 Possess the updated list of the dangerous goods in the ship and declare them to the authorities.

2.3.12 Take the necessary safety measures for illegitimate, improper, unsafe, risk-posing for ship, persons or environment and report the case to the port authority..

2.3.13 Report the dangerous goods accident in the ship to the port authority.

2.3.14 Provide the necessary support and cooperation for controls made by the authorities.

2.4 Responsibilities of the Dangerous Goods Safety Consultant

2.4.1 Follow the compliance with the requirement to the transport of the dangerous goods..

2.4.2 Provide recommendations with regard to the transportation of hazardous materials to the port facility.

2.4.3 Prepare an annual report on the dangerous goods transportation activities of the facility operator to the port facility.(Annual reports are kept for years and submitted to the authorities upon request.)

2.4.4 Check the applications and methods described below;

2.4.4.1 Procedures regarding to appropriate identification of hazardous substances delivered to the facility, correct use of shipping names of dangerous cargo, certification, packaging, labeling and declaration, inspection on loading and transport of dangerous goods in the certified and proper package, container or cargo unit in a safety way and reporting of inspection results..

2.4.4.2 Loading / unloading evacuation procedure related to handled and temporary dangerous goods,

2.4.4.3 Check that if the port facility considers the special requirements relating to dangerous goods while purchasing means of conveyance regarding to the handled dangerous goods.,

2.4.4.4 Control methods of transport equipment used in loading and unloading of hazardous substances,,


2.4.4.5 Including the amendments to the legislation, to check that whether the port facility personnel has necessary training and whether the records of this training is available,

2.4.4.6 Convenience of the emergency methods to be applied in case of occurrence of an accident or incident that may effect the safety during the transport, loading or unloading of the dangerous goods.,

2.4.4.7 Convenience of the reports prepared on the serious accidents, incidents or serious infringements occurring during the transport, loading and unloading of the dangerous substances,

2.4.4.8 Determine the necessary precautions for the possibility of the re-occurrence of the accidents, incidents or serious violations and evaluation of the practices,

2.4.4.9 Check what extent the requirements of the transport of the dangerous good are considered among the selection of the sub-contractor,

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2.4.4.10 Determine whether the personnel has detailed knowledge on operational procedures and instructions for the transportation, handling, storage and shipment / discharge of hazardous substances,

2.4.4.11 Convenience of the measures taken for the transportation, handling, storage and shipment / discharge of hazardous substances

2.4.4.12 Procedures on the identification of all necessary documents, information and certifications relating to hazardous materials.

2.4.4.13 Procedures on berthing, loading / unloading, sheltering or anchoring of ships carrying dangerous substances to the port facility day and night safely.

2.4.4.14 Procedures on the additional measures to be taken for loading and unloading of the dangerous goods according to the seasonal conditions.

2.4.4.15 Procedures on fumigation, gas metering and degasification operations. Procedures on keeping records and statistics of hazardous materials,

2.4.4.16 Accuracy of the matters related to the ability and capacity of the port facility for respond to emergencies,

2.4.4.17 Convenience of the regulations for early intervention for accidents involving hazardous substances,

2.4.4.18 Procedures on handling and disposal of damaged dangerous goods and wastes contaminated with dangerous goods,

2.4.4.19 Information for the personal protective clothing and procedures among their use.

2.5 Responsibilities of 3rd party, cargo / ship broker etc. operating in the port facility


2.5.1 Ensure that their personnel participating in the port facility has necessary training specified in the 27.03.2013 dated No. 79462207/315 Circular of the Authority,

2.5.2 Comply with the requirements set out in the IMDG Code,

2.5.3 Comply with the procedures for Hazardous Goods Guide and Hazardous substances formed by the port facility,

2.5.4 Handling, transport and storage of hazardous substances in the port facility and report any violation to the relevant authority,

2.5.5 Submit the (SDS) Form, which constitutes an integral part of the operations for the elimination of the Occupational Health and Safety risks that may occur during the use and storage of dangerous substances and prepared to inform the users accurately and adequately, to the port facility and Port Authority.

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3 POLICIES/APPLIED RULES AND MEASURES TO BE FOLLOWED BY PORT FACILITY

The rules and measures given in this chapter are elaborated in Chapters 1,4,6,7,8,9 and 10 under Hazardous Material Emergency Plan and Accident Prevention Policy. The requirement for infrastructure is met by our port facilities.

3.1 Berthing

3.1.1 Adequate and safe mooring facilities are provided; and

3.1.2 Adequate safe access is provided between the ship and the shore.

3.2 Supervision

3.2.1 The port operator should ensure that areas where packages or cargo transport units are kept are properly supervised and packages or cargo transport units are regularly inspected for leakage or damage. Any leaking package or cargo transport units should only be handled under the supervision of a responsible person.

3.2.2 The port operator should ensure that no person, without reasonable cause, opens or otherwise interferes with any freight container, tank-container, portable tank or vehicle containing dangerous cargoes. When a freight container, tank-container, portable tank or vehicle is opened by a person authorized to examine its contents, the port operator should ensure that the person concerned is aware of the possible hazards arising from the presence of the dangerous cargoes.

3.2.3 Any equipment which is used for handling and stowing processes and driven with or without power shall be checked and inspected to ensure that it is manufactured in accordance with the manufacturer's instructions and exists in good operating conditions and in compliance with proper standards.

3.3 Identification, packing, marking, labelling or placarding and certification

3.3.1 The port operator should ensure that dangerous cargoes entering his premises have been duly certified or declared by the cargo interests as being properly identified, packed, marked, labelled or placarded so as to comply with the appropriate provisions of the IMDG Code or, alternatively, with appropriate national or international legal requirements applicable to the relevant mode of transport.

3.4 Safe handling and segregation

3.4.1 A port operator transporting or handling dangerous cargoes should appoint at least one responsible person who has adequate knowledge of the national or international legal requirements concerning the transport and handling of dangerous cargoes, including the segregation of incompatible cargoes.


3.5 Emergency procedures

3.5.1 The port operator should ensure that appropriate emergency arrangements are made and brought to the attention of all concerned. These arrangements should include:

3.5.1.1 the provision of appropriate emergency alarm operating points;

3.5.1.2 procedures for notification of an incident or emergency to the appropriate emergency services within and outside the port area;

3.5.1.3 procedures for notification of an incident or emergency to the port authority and port area users both on land and water;

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3.5.1.4 the provision of emergency equipment appropriate to the hazards of the dangerous cargoes to be handled;

3.5.1.5 co-ordinated arrangements for the release of a ship in the case of an emergency; and

3.5.1.6 arrangements to ensure adequate access/egress at all times.

3.5.2 The port operator should consider the necessity of arrangements for a safe and quick emergency escape, taking into account the nature of the dangerous cargoes and any special conditions.

3.5.3 The "Medical First Aid Guidelines (MFAG)" annexed to IMDG Code shall be used to provide with those persons effected from damages caused by hazardous loads with medical first aid in case of any health issues occurring in consequence of accidents involving such loads.

3.5.4 "Emergency Schedules (EmS)" annexed to IMDG Code shall be used for any emergencies involving hazardous loads.

3.5.5 In case of any emergencies or accidents, the first aid material to be used for response shall be kept in easily accessible locations known to personnel.

3.6 Emergency information

3.6.1 The port operator should ensure that a list of all dangerous cargoes in the warehouses, sheds or other areas, including the quantities, and if appropriate Proper Shipping Names, correct technical names (if applicable), UN numbers, classes or, when assigned, the division of the goods, including for class 1, the compatibility group letter, subsidiary hazard classes (if assigned), packing group (where assigned) and exact location is held readily available for the emergency services.

3.6.2 The port operator should ensure that the responsible person for a warehouse, shed or area, where dangerous cargoes are handled, is as far as possible aware of the status of occupancy with the dangerous cargoes in his area and is available in case of emergencies.

3.6.3 The port operator should ensure that the person responsible for cargo handling operations involving dangerous cargoes has the necessary information on measures to be taken to deal with incidents involving dangerous cargoes and that it is available for use in emergencies.


3.6.4 Electronic or other automated information processing or transmission techniques shall be employed to provide access to information.

3.6.5 Data sheets of hazardous materials shall normally be kept by the manufacturers of chemicals. Emergency response information and electronic databases shall be available and used in case of direct access to information.

3.6.6 The port operator should ensure that the port or berth emergency response procedures and port or port emergency telephone numbers are placed at prominent locations within or at warehouses, sheds or areas where dangerous cargoes are transported or handled.

3.6.7 The port operator should ensure that fire-fighting and pollution-combating equipment and installations are clearly marked as such and notices drawing attention to them are clearly visible at all appropriate locations.

3.6.8 The port operator should inform the master of any ship carrying or handling dangerous cargoes of the emergency procedures in force and the services available at the port.

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3.7 Fire precautions

3.7.1 The port operator should ensure that:

3.7.1.1 All parts of the port and any ship moored to it are at all times accessible to emergency services;

3.7.1.2 Audible or visual alarms for emergency use are installed in the area or other means of rapid communication with emergency services are available;

3.7.1.3 The handling of dangerous cargoes are kept clean and tidy;

3.7.1.4 Before dangerous cargoes are handled, the master of a ship is informed of the location of the nearest means of summoning emergency services; and

3.7.1.5 the lighting and other electrical equipment in areas where dangerous cargoes are present on the port is of a type safe for use in a flammable or explosive atmosphere.

3.7.1.6 Places where smoking is prohibited are designated; and

3.7.1.7 Notices in a pictogram form prohibiting smoking are clearly visible at all locations and at a safe distance from places where smoking would constitute a hazard.

3.7.1.8 The port operator should ensure that equipment used in an area or space where a flammable or explosive atmosphere may exist or develop, is of a type safe for use in a flammable or explosive atmosphere and used in such a manner that no fire or explosion can be caused.

3.7.1.9 The port operator should ensure that only portable electrical equipment of a type safe for use in a flammable atmosphere is used in an area or space in which a flammable atmosphere may occur.

3.7.1.10 The port operator should ensure that electrical equipment on a wandering lead is not used in areas or spaces where a flammable atmosphere may occur.

3.8 Fire fighting

3.8.1 The port operator should ensure that adequate and properly tested fire-fighting equipment and facilities are provided and readily available in accordance with the requirements of the regulatory authority in areas where dangerous cargoes are transported or handled.

3.8.2 The port operator should ensure that personnel involved in the handling or transport of dangerous cargoes are trained and practised in the use of fire-fighting equipment in accordance with the requirements of the regulatory authority.

3.9 Environmental precautions


3.9.1 The port operator should ensure that dangerous cargoes are only handled in areas which comply with the requirements of the regulatory authority.

3.9.2 The port operator should ensure that any damaged package, unit load or cargo transport unit containing dangerous cargoes is dealt with in accordance with the requirements of the regulatory authority and is not transported or handled unless the dangerous cargoes have been properly repacked and are in all respects fit and safe for further transport and handling.

3.9.3 The port operator should ensure that, if necessary, any damaged package, unit load or cargo transport unit containing dangerous cargoes is removed to a designated area for such cargoes.

sweeping or flushing. The said loads shall not be allowed to move into sea by rainwater.

3.9.4 During the loading and unloading of bulk cargo to and from the vessel, necessary actions shall be taken to prevent the dumping of any load from the vessel or the dock into sea. In addition, these actions shall be taken for transshipment operations.

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3.9.5 Necessary actions shall be taken so that soil, water or areas of water discharge is/are not contaminated with any hazardous materials handled at onshore facilities. Additionally, these actions shall be applied for the piping line used during the handling of hazardous materials and for areas with conveyor system.

3.9.6 The capability to remove any contaminated bilge water, dirty ballast, sludge, slope and load waste from the vessel shall be provided.

3.10 Pollution combating

3.10.1 The port operator should ensure that adequate equipment is available to minimize the damage in case of a spillage of dangerous cargoes.

3.10.2 The equipment includes petroleum dispersion preventive fences, condensate lids, absorbing and neutralizing agents as well as cleaning agents and portable collection basins.

3.10.3 The port operator should ensure that personnel involved in the transport and handling of dangerous cargoes are trained and practised in the use of pollution combating equipment and facilities in accordance with the requirements of the regulatory authority.

3.11 Reporting of incidents

3.11.1 The port operator, within his area of responsibility, should ensure that, if an incident occurs during the handling of dangerous cargoes which may endanger the safety or security of persons, of ships within the port, of the port or of any other property, or the environment, the person having charge of the handling immediately causes the operation to be stopped, if it is safe to do so, and prevents it being resumed until appropriate safety measures have been taken. The port operator should require every member of his personnel to report, to the person having charge of the operation, any such incident they see to occur during the handling of dangerous cargoes.

3.11.2 For the purposes of responding quickly and effectively; the short and proper description of the event should be communicated to the emergency center as soon as possible to treat the injured personnel and mitigate any potential damage.


3.11.3 The port operator should ensure that any incident involving dangerous cargoes which may endanger the safety or security of persons, or of ships within the port or of the port or of any other property or the environment is reported immediately to the port authority.

3.11.4 The port operator should ensure that any damaged or leaking package, unit load or cargo transport unit containing dangerous cargoes is reported immediately to the port authority and that suitable remedial action is taken

3.12 Inspections

3.12.1 The port operator, where appropriate, should:

3.12.1.1 Check documents and certificates concerning the safe transport, handling, packing and stowage of dangerous cargoes in the port area at the time of receipt;

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3.12.1.2 Check, where practicable, packages, unit loads and cargo transport units containing dangerous cargoes to verify that they are marked, labelled or placarded in accordance with the provisions of the IMDG Code and the appropriate national or international legal requirements applicable for the mode of transport and that unnecessary labels, placards and marks have been removed and that the cargo transport units have been loaded, packed and secured in accordance with the IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs);

3.12.1.3 Check freight containers, tank-containers, portable tanks and vehicles containing dangerous cargoes to ensure that they have a current safety approval plate in accordance with the International Convention for Safe Containers (CSC), 1972, as amended, when applicable, or have been approved in accordance with the relevant provisions of the IMDG Code or by a certification or approval system of an appropriate authority; and

3.12.1.4 Check, by external examination, the physical condition of each freight container, tank-container, portable tank or vehicle containing dangerous cargoes for obvious damage affecting its strength or packaging integrity and for the presence of any sign of leakage of contents.

3.12.2 The port operator should make such checks regularly to ensure implementation of the safety precautions in the port area and the safety of transport.

3.12.3 If any of the checks mentioned above reveal deficiencies which may affect the safe transport or handling of dangerous cargoes the port operator should immediately advise all parties concerned and request them to rectify all deficiencies prior to any further transport or handling of dangerous cargoes.


3.12.4 The port operator should ensure that every necessary support will be given to the port authority or any other person or institution entitled to carry out inspections when they intend to carry out an inspection of dangerous cargoes.

3.13 Hot work and other repair or maintenance work

3.13.1 The port operator should ensure that no repair or maintenance work resulting in non-availability of the emergency/fire equipment required by these Recommendations is carried out at the port without prior permission of the port authority.

3.13.2 The port operator and the company carrying out the repairs, after having consulted the master of a ship, where appropriate, should ensure that they are in possession of a permit to proceed issued by the port authority before any repair or maintenance work involving hot work, or any other such work which may lead to a hazard because of the presence of dangerous cargoes, is carried out.

3.13.3 A prior notice to be served for the estimated duration of hot work or the lack of equipment as a result of the need for permission shall allow all emergency response authorities, such as fire department, to make a satisfactory announcement to express their objection and recommend additional measures. In case of particular circumstances, such as any hot work to be performed in a hold or closed areas near a hold, the skilled personnel capable of determining whether specific safety measures are necessary shall perform a detailed field survey.

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3.14 Entry into confined or enclosed spaces

3.14.1 The port operator should ensure that no person enters any enclosed space such as, for example, a cargo space, cargo tank, void space around such tank, cargo handling space, or other confined or enclosed space which has contained or may contain dangerous vapour or oxygen depleting cargoes, unless the space is free of dangerous vapour and not deficient in oxygen, and is certified to that effect by a responsible person trained in the use of the relevant equipment and sufficiently knowledgeable to interpret correctly the results obtained. The responsible person should record the measurements taken.

3.14.2 Where it is necessary for operational purposes to enter a space which cannot be freed of dangerous vapour within a reasonable time and which, therefore, can not be certified, or it is unlikely that the space will remain free of dangerous vapour, then entry should only be made by persons wearing a self-contained breathing apparatus and any other necessary protective equipment and clothing. The entire operation should be carried out under the direct supervision of a responsible person who should be provided with self-contained breathing apparatus, protective equipment and rescue harness. The breathing apparatus, protective and rescue equipment should not be of a type that could introduce a source of ignition into the space.

3.14.3 The port operator should ensure that entry into a space follows carefully established procedures which are contained in international codes and guides.

3.15 Contaminated wastes

3.15.1 The port operator should ensure that wastes contaminated with dangerous cargoes are immediately collected and disposed of in accordance with the requirements of the regulatory authority.

3.16 Alcohol and drug abuse

3.16.1 The port operator, within his area of responsibility, should ensure that no person under the influence of alcohol or drugs is allowed to participate in any operation involving the handling of dangerous cargoes.


3.16.2 Any such persons should always be kept clear of the immediate areas where dangerous cargoes are being transported or handled.

3.17 Weather conditions

3.17.1 The port operator, within his area of responsibility, should not permit dangerous cargoes to be handled in weather conditions which may seriously increase the risk.

3.18 Lighting

3.19.1 The port operator, within his area of responsibility, should ensure that areas where dangerous cargoes are handled or where preparations are being made to handle dangerous cargoes and access to such areas are adequately illuminated.

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3.19 Handling equipment

3.20.1 The port operator, within his area of responsibility, should ensure that all equipment used in the handling of dangerous cargoes is suitable for such use and used only by skilled persons.

3.20.2 The port operator, within his area of responsibility, should ensure that all cargo handling equipment is of an approved type where appropriate, properly maintained and tested in accordance with national and international legal requirements.

3.20 Protective equipment

3.21.1 The port operator, within his area of responsibility, should ensure, when necessary, that a sufficient quantity of appropriate protective equipment is available to all personnel involved in the handling of dangerous cargoes.

3.21.2 Such equipment should provide adequate protection against the hazards specific to the dangerous cargoes handled and should be of an approved type or made in conformity with an approved standard.

3.21 Signals

3.21.1 The regulatory authority should decide if and when a ship engaged in the transport or handling of certain specified dangerous cargoes in the port area, should exhibit by day or by night any special visual signals.

3.21.2 The specified dangerous cargoes should include:

3.21.2.1 bulk liquids with a flashpoint below 60°C closed cup;

3.21.2.2 bulk flammable and/or toxic gases; and

3.21.2.3 explosives (other than division 1.4S), liquid desensitized explosives assigned to class 3 and solid desensitized explosives assigned to class 4.1; to the degree specified by the regulatory authority.

3.21.3 The reason for exhibiting a day or night signal is to advise maritime traffic and personnel within the port area about an increased hazard created by the presence of the dangerous cargoes. Vessels exhibiting such signals may be subject to the special requirements and special instructions of the port authority.

3.21.4 The following four scenarios should be considered:

3.21.4.1 the ship is moored or at anchor by day;

3.21.4.2 the ship is moored or at anchor at night;

3.21.4.3 the ship is under way by day; or

3.21.4.4 the ship is under way at night.

3.21.5 When practicable, a dedicated anchorage or port should be provided for vessels carrying dangerous cargoes requiring the exhibition of such signals. Special restrictions may be applied to:

3.21.5.1 access to the vessels;

3.21.5.2 radio and radar transmissions;


3.21.5.3 transiting the anchorage; and

3.21.5.4 passing of ships moored or anchored.

3.21.6 Port authorities should give consideration to the separation of ships under way exhibiting the signals. The port authority may also impose specific separation distances and regulate the movement of vessels to avoid the passing of such ships in narrow channels or at bends. Where signals are to be exhibited, they should be:

3.21.6.1 by day flag “B” of the International Code of Signals; and

3.21.6.2 by night an all-round fixed red light.

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3.22 Communications

3.22.1 The port authority should ensure that every ship engaged in the transport of dangerous cargoes can maintain effective communications with the port authority. When appropriate and practicable such communications should be carried out by VHF in accordance with the provisions of SOLAS regulation IV/7 and complying with the performance standards set out in IMO Assembly resolution A.609(15) and the requirements of the regulatory authority.

3.23 Areas

3.23.1 Dangerous cargo areas

3.23.1.1 Dangerous cargo areas should, where possible, be located so that management and/or security personnel may keep them under continuous observation. Otherwise, an alarm system may be provided or the spaces inspected at frequent intervals.

3.23.1.2 The spaces should enable an adequate segregation of dangerous cargoes in accordance with the legal requirements of the regulatory authority.

3.23.1.3 Dangerous cargo areas should have separate areas with all necessary facilities appropriate to the hazards emanating from the cargoes to be kept. Where appropriate these facilities should include separate ventilation, drainage, fire resisting walls, ceilings, etc.

3.23.1.4 Those areas where hazardous materials are handled shall be furnished with necessary equipment and devices to prevent potential harmful effects of such hazardous materials.

3.23.1.5 The areas where hazardous materials are handled shall be provided with facilities of entrance to and exit from the same to allow for response to emergencies or the access roads to those units carrying loads that contain hazardous materials shall be kept open, if any hazardous materials are stowed or stored on the entire site and the site shall be furnished with systems that are capable of providing emergency facilities for rapid response.


3.23.2 Lorry parking areas

3.23.2.1 Separate areas may be designated for specific dangerous cargoes.

3.23.2.2 Segregation requirements of the regulatory authority should be met when designating areas.

3.23.2.3 Care should be taken that, in case of an emergency, adequate access is provided for handling equipment, emergency services, etc.

3.23.2.4 Adequate emergency facilities should be provided. These should be appropriate to the hazards of the dangerous cargoes to be handled.

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3.23.3 Special areas for damaged dangerous cargoes and wastes contaminated with dangerous cargoes

3.23.3.1 Special areas for damaged dangerous cargoes and wastes contaminated with dangerous cargoes should be provided, where damaged dangerous cargoes may be kept and repacked or contaminated wastes separated and kept until their disposal.

3.23.3.2 Such areas should, where appropriate, be covered, have a sealed floor or ground, separate drainage systems with shut-off valves, sumps or basins and means to discharge contaminated water to special facilities in order to safeguard the port area and the environment.

3.23.3.3 Such areas should be fenced off to prevent the entry of unauthorized persons and should have facilities for watchmen. The facilities should include adequate means of communication.

3.23.4 Repairing/cleaning facilities

3.23.4.1 Where repair or cleaning facilities for ships or cargo transport units are provided, they should be situated well away from any area where dangerous cargoes are transported or handled. This should not preclude the carrying out of minor voyage repairs on ships at cargo handling ports or cleaning of cargo tanks at tanker terminals.


3.23.4.2 Cleaning facilities should be designated and constructed to protect the environment when environmentally hazardous substances are used or are otherwise involved, in the cleaning process.

3.23.5 Reception facilities

3.23.5.1 Facilities should be provided for the reception and disposal of bilge water, wastes, ballast and slops, contaminated with dangerous cargoes, as appropriate.

3.24 Training

3.24.1 The personnel who are in charge of actions and operations for the loading/unloading of hazardous materials at the onshore facility shall be provided with training on emergencies (fire, explosion, leakage etc.) and response, occupational health and safety, ISPS code security awareness and safety in line with their job descriptions and fields of work.

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4 CLASSIFICATION OF DANGEROUS GOODS, HANDLING, LOADING / UNLOADING, HANDLING, SEPARATION, STACKING AND STORING

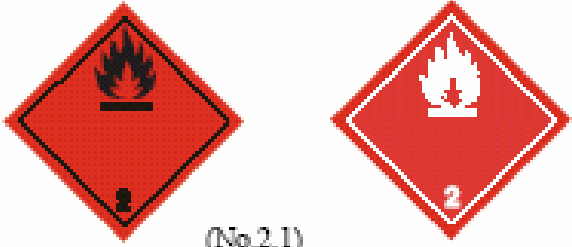
4.1 Classification of Dangerous Goods

| NAME OF THE PRODUCT | UN CODE | CLASS |
|---------------------|---------|-------|
| Propan | UN 1965 | 2 |
| Bütan | UN 1965 | 2 |



4.2 Dangerous Goods Packing and Packages

We handle hazardous material as liquied bulk cargo in our facility.


4.3 Dangerous Goods Marking, Labels, Placards. Class 3 – Flammable Liquids


| | |
|--|--|
|  | <p>Symbol – flame in black and white color Background – red color Text – Flammable Liquid (optional) Number 2 – in the bottom corner</p> |
|--|--|

Other labels





| | |
|---|---|
|  | <p>Indicating elevated temperature (liquid state at a temperature equal to or exceeding 100⁰ C, in a solid state at a temperature equal to or exceeding 240⁰ C)</p> |
|  | <p>Orange-colored plates, with hazard-identification number and UN Number</p> |

Placards for Marine Pollutants

| | |
|---|--|
|  | <p>Packages and cargo transport units containing dangerous substances which are classified by the IMDG Code as “marine pollutants”, must have the markings shown here, which must be durable. They must be placed close to the risk labels or risk placards of the goods. The dimensions of the marine pollutant markings must be a minimum of 10 cm per side for packages and 25 cm per side for cargo transport units.</p> |
|---|--|

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4.4 Tehlikeli maddelerin işaretleri ve paketleme grupları.

| NAME OF THE PRODUCT | UN CODE | CLASS | Marking | Packing Group |
|---------------------|---------|-------|--|---------------|
| Propan | UN 1965 | 2 |   (No. 2.1) | PG III |
| Bütan | UN 1965 | 2 |   (No. 2.1) | PG III |

4.5 Segregation and Separation

Only Class 2 products are handled. Segregation and Separation are not applied.

4.6 Dangerous Goods Documentation

Information which must be included in the Dangerous Goods Transportation Document:

The shipping name or correct technical name (no commercial names will be accepted)

The Class and Division when applicable. The Class or Division can be included in the risk class number. The compatibility group will also be indicated in goods from class 1; and in the case of gases involving secondary risks, information will be extended to indicate such risks

The United Nations number preceded by the letters UN

The packing group when assigned

The number and types of bundles, as well as the total quantity of dangerous goods per volume or mass

The flashpoint for materials having a flashpoint the same or lower than 61o C


The subsidiary risks not indicated in the shipping name

When applicable, the goods shall be identified as "Marine Pollutant"

Empty means of containment, which contain the residue of dangerous goods shall be described as such, for example, by placing the words "Empty", "Uncleaned" or "Residue Last Contained" before or after the proper shipping name

For dangerous goods in limited quantities, the phrase "Dangerous Goods in Limited Quantity" shall be included

A statement signed in the name of the consignor, saying that the goods are correctly described, classified, packed, marked and labeled and that its conditions are appropriate for transport


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5 HANDBOOK OF DANGEROUS GOODS

Dangerous cargo shipment / discharge with handling and port facilities in the temporary storage activities in order to contribute to the fulfillment of these activities in a safe manner;

- Dangerous Goods classes,
- Packages of dangerous substances,
- Packaging,
- Labels,
- Signs and packaging group,
- Ship and port separation table according to the class of dangerous goods,
- Warehouse / port separation distance of dangerous goods storage,
- Separation terms,
- Dangerous cargo documentation,
- Loads containing dangerous emergency action flowchart issues,

Prepared as Hazardous Material Handbook in the size of a pocketbook and given as annexed hereto

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6 PROCEDURES FOR THE OPERATION

6.1 Prosedure of ships carrying dangerous goods safely Berthing, loading / unloading, shelter or anchorage during the day and at night

6.1.1 Direct when and where a ship, having any dangerous cargoes on board, should anchor, moor, berth or remain within the port area, taking into consideration relevant matters such as the quantity and nature of the dangerous cargoes involved, the environment, the population, the weather conditions;


6.1.2 Direct, in an emergency, a ship having any dangerous cargoes on board to be moved within the port area, or to be removed from the port area having due regard to the safety of the ship and its crew; and

6.1.3 Attach such requirements to any such directions as are appropriate to local circumstances and the quantity and nature of the dangerous cargoes involved.

6.1.4 The port operator should ensure that:


6.1.4.1 adequate and safe mooring facilities are provided; and

6.1.4.2 adequate safe access is provided between the ship and the shore.

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6.2 Procedure of according to the seasonal conditions additional measures that Loading/Unloading, limbo operation of dangerous goods should be taken by port facilities

6.2.1 Liquid bulk dangerous cargoes should not be handled during thunderstorms

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6.3 Procedures on keeping any inflammable, combustible and explosive materials away from operations which cause or are likely to cause sparking and abstaining from operating any tools, apparatus or device which cause or are likely to cause sparking in areas where hazardous materials are handled, stowed and stored

6.3.1 Before starting any hot work, on board a ship or on a port, the responsible person of the company to carry out the hot work shall be in possession of a written authorization to carry out such hot work issued by the port authority. Such authorization should include details of the specific location of the hot work as well as the safety precautions to be followed.

6.3.2 In addition to the safety precautions required by the port authority, before starting any hot work, the responsible person of the company to carry out the hot work together with the responsible person(s) of the ship and/or port, should add any additional safety precautions required by the ship and/or port.

6.3.3 These should include:

6.3.3.1 the examination, and frequency of re-examination of local areas and adjacent areas, including tests, carried out by accredited testing establishments, to ensure the areas are free, and continue to be free, of flammable and/or explosive atmospheres and, where appropriate, are not deficient in oxygen;

6.3.3.2 the removal of dangerous cargoes and other flammable substances and objects away from the working and adjacent areas. This includes scale, sludge, sediment and other possible flammable material;

6.3.3.3 efficient protection of flammable structural members, e.g. beams, wooden walls, floors, doors, wall and ceiling coverings against accidental ignition; and

6.3.3.4 the sealing of open pipes, pipe lead-throughs, valves, joints, gaps and open parts to prevent the transfer of flames, sparks and hot particles from the working areas to adjacent or other areas.

6.3.4 A duplicate of the hot work authorization and safety precautions should be posted adjacent to the work area as well as at each entrance to the work area. The authorization and safety precautions should be readily visible to, and clearly understood by, all persons engaged in the hot work.

6.3.5 While carrying out hot work it is essential that:


6.3.5.1 checks are carried out to ensure that conditions have not changed; and

6.3.5.2 at least one suitable fire extinguisher, or other suitable fire-extinguishing equipment is readily available for immediate use at the location of the hot work.

6.3.6 During hot work, on completion and for a sufficient time after completion of such work, an effective fire-watch should be maintained in the area of the hot work as well as adjacent areas where a hazard resulting from the transfer of heat may be created.


6.3.7 Additional valuable guidance on hot work procedures may be found. In particular, the International Safety Guide for Oil Tankers and Terminals (ISGOTT) should be consulted.

6.3.8 In addition, Port Facility Occupational Safety Procedures shall be followed.

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6.4 Procedures on fumigation, gas measurement and degasification

N/A

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7 Documentation, Control And Record

7.1 Procedures regarding to all necessary documents, information and certification relating to dangerous substances and their procurement and control by the relevant persons

7.1.1 The following documents related to hazardous substances are kept up to date.

IMDG Code International Maritime Dangerous Goods Code


MARPOL 73/78 International Convention for the Prevention of Pollution from Ships, 1973/78 as amended

S O L A S 74 International Convention for the Safety of Life at Sea, 1974 as amended

IBC Code International Code for the Construction and Equipment of Vessels Carrying Hazardous Chemicals in Bulk

7.1.2 The Operational Division for Hazardous Materials handled by our Port shall develop all records fully and keep the same for submission upon request regarding any hazardous materials
arriving at the port,
shipped from the port,
stored at the port, and
stored at the port on a temporary basis.

The records of hazardous materials are limited to the personnel who need to know the same.


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7.2 Procedures of keeping a regular and accurate current list of all hazardous substances in the coastal facility area and other relevant information.

7.3.1 Records of dangerous cargo handled in our port will be kept by the Operations department to include the following information.

- Number,
- PSN name (Proper Shipping Name,
- Class (with lower hazards)
- Marine Pollutant or otherwise
- Receiver,
- Shipper,
- Seal number
- Additional Information (ignition temperature, viscosity, etc.)
- Storage location in the Port Area
- Duration of stay in the Port

7.2.2 This information is recorded on computer or in the file layout so that only authorized personnel can access and presented upon request.


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7.3 Procedures regarding to appropriate identification of hazardous substances delivered to the facility, correct use of shipping names of dangerous cargo, certification, packaging, labeling and declaration, inspection on loading and transport of dangerous goods in the certified and proper package, container or cargo unit in a safety way and reporting of inspection results.

7.3.1 Coordinately with the Operation, Planning checks the accuracy of the following information through the dangerous cargo documents delivered to the Port and organized by the Shipper;

- Number,
- PSN name (Proper Shipping Name,
- Class (with lower hazards)
- Marine Pollutant or otherwise,
- Seal number
- Additional Information (ignition temperature, viscosity, etc.)
- Storage location in the Port Area

7.3.2 This information is delivered to the tally clerk, Field Supervisor, Warehouse officer, HSE, and authorized staff through Terminals / Documents and security of the dangerous goods is provided.


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7.4 Procedures related to procurement of the Hazardous materials safety information sheets (SDS).

7.4.1 According to the Laws of our country as of January 1st, 2014, Dangerous Goods Safety Data Sheet (SDS) with the following information must be present with the dangerous goods to be transported through all transport modes (by road, rail, air and marine).

- Number,
- PSN name (Proper Shipping Name,) (required for marine transport)
- Class (with lower hazards)
- Marine Pollutants or otherwise,
- Tunnel Restriction Code (required for road transport).

7.4.2 It is checked that if this document is available with the Dangerous substance for the all Dangerous goods to be accepted in the port.

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7.5 Procedures for records and statistics of dangerous goods.

7.5.1 Administration, it is required that a report including the information of dangerous goods handled in our Port Facility will be reported to the Port Authority in by 3-month periods. The report sample issued by the Operation Department are shown below.

7.5.2 Statistical evaluation of records of dangerous goods handled in our port is carried out by our Trade, operation departments.

7.5.3 Monthly inventory and control reports of Dangerous goods stocked in our Port Area is organized by the operation department and submitted to Administration.

7.5.4 Records and reports are archived by department by 5-year periods

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8 EMERGENCY SITUATION, EMERGENCY PREPAREDNESS AND RESPONSE

8.1 Response procedures for hazardous substances that are dangerous for life, property and/or environment and hazardous situations involving hazardous materials

8.1.1 Decision making;

The choice of protective actions for a given situation depends on a number of factors. For some cases, evacuation may be the best option; in others, sheltering in-place may be the best course. Sometimes, the set of actions may be used in combination. In any emergency, officials need to quickly give the public instructions. The public will need continuing information and instructions while being evacuated or sheltered in-place.

Proper evaluation of the factors listed below will determine the effectiveness of evacuation or in-place protection (shelter in-place). The importance of these factors can vary with emergency conditions. In specific emergencies, other factors may need to be identified and considered as well. This list indicates what kind of information may be needed to make the initial decision.

The Dangerous Goods

Degree of health hazard

Chemical and physical properties

Amount involved

Containment/control of release

Rate of vapor movement

The Population Threatened

Location

Number of people

Time available to evacuate or shelter in-place

Ability to control evacuation or shelter in-place

Building types and availability


Special institutions or populations, e.g., nursing homes, hospitals, prisons

Weather Conditions

Effect on vapor and cloud movement

Potential for change

Effect on evacuation or shelter in-place

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8.1.2 Protective Actions and Response

Protective Actions are those steps taken to preserve the health and safety of emergency responders and the public during an incident involving releases of dangerous goods and Appendix-5 produced according to specified hazardous substances in the feature act according to the Emergency Response Table.

Isolate Hazard Area and Deny Entry means to keep everybody away from the area if they are not directly involved in emergency response operations. Unprotected emergency responders should not be allowed to enter the isolation zone.

8.1.3 Evacuate

Evacuate means to move all people from a threatened area to a safer place. To perform an evacuation, there must be enough time for people to be warned, to get ready, and to leave an area. If there is enough time, evacuation is the best protective action.

Begin evacuating people near by and those outdoors in direct view of the scene. When additional help arrives, expand the area to be evacuated downwind and crosswind to at least the extent recommended in measures specified in the Emergency Response Table referred to in Annex-5. Even after people move to the distances recommended, they may not be completely safe from harm.

They should not be permitted to congregat at such distances. Send evacuees to a definite place, by a specific route, far enough away so they will not have to be moved again if the wind shifts.

In the case of an emergency, the areas to which the persons are to be assembled in the Terminal are identified and marked as "Emergency Assemble Points".

8.1.4 Shelter In-Place


Shelter In-Place means people should seek shelter inside a building and remain inside until the danger passes. Sheltering in-place is used when evacuating the public would cause greater risk than staying where they are, or when an evacuation cannot be performed. Direct the people inside to close all doors and windows and to shut off all ventilating, heating and cooling systems.

In-place protection (shelter in-place) may not be the best option if

- the vapors are flammable;
- if it will take along time for the gas to clear the area; or
- if buildings cannot be closed tightly.

It is vital to maintain communications with competent persons inside the building so that they are advised about changing conditions. Persons protected-in-place should be warned to stay far from windows because of the danger from glass and projected metal fragments in a fire and/or explosion.

Every dangerous goods incident is different. Each will have special problems and concerns. Action to protect the public must be selected carefully.

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BLEVE(Boiling Liquid Expanding Vapor Explosion)

Background information on BLEVEs and includes a chart that provides important safety-related information to consider when confronted with this type of situation involving Liquefied Petroleum Gases (LPG), UN1075. LPGs include the following flammable gases; Butane, UN1011; Butylene, UN1012; Isobutylene, UN1055; Propylene, UN2077; Isobutane, UN1969; and Propane, UN1978.

What are the main hazards from a BLEVE?

The main hazards from a propane or LPG BLEVE are:

- fire
- thermal radiation from the fire
- blast
- projectiles

BLEVE –SAFETY PRECAUTIONS

Use with caution. The following table gives a summary of tank properties, critical times, critical distances and cooling water flow rates for various tank sizes. This table is provided to give responders some guidance but it should be used with caution.


Tank dimensions are approximate and can vary depending on the tank design and application.

Minimum time to failure is based on severe torch fire impingement on the vapour space of a tank in good condition, and is approximate. Tanks may fail earlier if they are damaged or corroded. Tanks may fail minutes or hours later than these minimum times depending on the conditions. It has been assumed here that the tanks are not equipped with thermal barriers or water spray cooling.

Minimum time to empty is based on an engulfing fire with a properly sized pressure relief valve. If the tank is only partially engulfed then time to empty will increase (i.e., if tank is 50% engulfed then the tanks will take twice as long to empty). Once again, it has been assumed that the tank is not equipped with a thermal barrier or water spray.

Tanks equipped with thermal barriers or water spray cooling significantly increase the times to failure and the times to empty. A thermal barrier can reduce the heat input to a tank by a factor of ten or more. This means it could take ten times as long to empty the tank through the Pressure Relief Valve (PRV).

Fireball radius and emergency response distance is based on mathematical equations and is approximate. They assume spherical fireballs and this is not always the case.

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Two safety distances for public evacuation. The minimum distance is based on tanks that are launched with a small elevation angle (i.e., a few degrees above horizontal). This is most common for horizontal cylinders. The preferred evacuation distance has more margin of safety since it assumes the tanks are launched at a 45 degree angle to the horizontal. This might be more appropriate if a vertical cylinder is involved.

It is understood that these distances are very large and may not be practical in a highly populated area. However, it should be understood that the risks increase rapidly the closer you are to a BLEVE. Keep in mind that the furthest reaching projectiles tend to come off in the zones 45 degrees on each side of the tank ends.

Water flow rate is based on $5\sqrt{\text{capacity (USgal)}}$ = usgal/min needed to cool tank metal.

Warning: the data given are approximate and should only be used with extreme caution. For example, where times are given for tank failure or tank emptying through the pressure relief valve—these times are typical but they can vary from situation to situation. Therefore, never risk life based on these times.

| BLEVE (USE WITH CAUTION) | | | | | | | | | | | |
|-----------------------------|---------------|---------------|-----------------|--|--|-----------------|-----------------------------|-----------------------------|-------------------------------|-------------------------|-----------|
| Capacity | Diameter | Length | Propane Mass | Minimum time to failure for severe torch | Approximate time to empty for engulfing fire | Fireball radius | Emergency response distance | Minimum evacuation distance | Preferred evacuation distance | Cooling water flow rate | |
| Litres (Gallons) | Meters (Feet) | Meters (Feet) | Kilograms (Lbs) | Minutes | Minutes | Meters (Feet) | Meters (Feet) | Meters (Feet) | Meters (Feet) | Litres/min | USgal/min |
| 100 (38.6) | 0.3 (1) | 1.5 (4.9) | 40 (88) | 4 | 8 | 10 (33) | 90 (295) | 154 (505) | 307 (1007) | 94.6 | 25 |
| 400 (154.4) | 0.61 (2) | 1.5 (4.9) | 160 (353) | 4 | 12 | 16 (53) | 90 (295) | 244 (801) | 488 (1601) | 189.3 | 50 |
| 2000 (772) | 0.96 (3.2) | 3 (9.8) | 800 (1764) | 5 | 18 | 28 (92) | 111 (364) | 417 (1368) | 834 (2736) | 424 | 112 |
| 4000 (1544) | 1 (3.3) | 4.9 (16.1) | 1600 (3527) | 5 | 20 | 35 (115) | 140 (459) | 525 (1722) | 1050 (3445) | 598 | 158 |
| 8000 (3088) | 1.25 (4.1) | 6.5 (21.3) | 3200 (7055) | 6 | 22 | 44 (144) | 176 (577) | 661 (2169) | 1323 (4341) | 848 | 224 |
| 22000 (8492) | 2.1 (6.9) | 6.7 (22) | 8800 (19400) | 7 | 28 | 62 (203) | 247 (810) | 926 (3038) | 1852 (6076) | 1404 | 371 |
| 42000 (16212) | 2.1 (6.9) | 11.8 (38.7) | 16800 (37037) | 7 | 32 | 77 (253) | 306 (1004) | 1149 (3770) | 2200 (7218) | 1938 | 512 |
| 82000 (31652) | 2.75 (9) | 13.7 (45) | 32800 (72310) | 8 | 40 | 96 (315) | 383 (1257) | 1435 (4708) | 2200 (7218) | 2710 | 716 |
| 140000 (54040) | 3.3 (10.8) | 17.2 (56.4) | 56000 (123457) | 9 | 45 | 114 (374) | 457 (1499) | 1715 (5627) | 2200 (7218) | 3539 | 935 |


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8.2 Information on resource, capability and capacity of the port facilities regarding to respond to emergencies.

8.2.1 The facility features an approved fire plan. Firefighting teams shall be created for each shift. Demonstrations and exercises, either scheduled or unscheduled, shall be provided for training purposes within the scope of various scenarios at indefinite times. The firefighting equipment stipulated by the approved plan shall be made available fully and maintenance, inspection and test activities shall be conducted for the same.

8.2.2 The facility has an approved action plan against Environmental and Marine Pollution. For each shift, pollution-fighting teams are created. Demonstrations and exercises shall be provided twice a year within the scope of a scheduled scenario, and the reports and records of the same shall be kept. The equipment relating to Environmental and Marine Pollution shall be stored at the facility with counting and inspections in place. Additionally, the facility shall have a protocol for materials stored in the area to ensure support in case of circumstances with inadequate means.


8.2.3 The response teams shall be appointed against the spillage of hazardous materials in line with this guideline and pursuant to IMDG Code.

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8.3 Regulations related to the the first aid for accidents involving dangerous substances (first aid procedures, first aid resources and capabilities and so on.).

The "Medical First Aid Guide (MFAG)" in the IMDG Code appendix and Emergency Plans (EmS) in the IMDG Code appendix are used for emergency situations involving dangerous cargoes.

At the same time, Emergency Response tables are also used in Annex-5 of the Dangerous Goods Emergency Plan.

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8.4 On-site and off site Notifications required to be made in case of emergency

- a) Time of accident occurrence,
 - b) How the accident occurs and its reason, if known,
 - c) Place where the accident occurs (onshore facility and/or vessel) and its position and impact area,
 - ç) Details of vessels involved in the accident, if any (name, flag, IMO no, owner, operator, cargo and its content, full name of the captain and similar details),
 - d) Meteorological conditions,
 - e) UN number of hazardous material and description of proper handling (the legislation provided in the description of hazardous materials shall apply) and quantity,
 - f) Hazard class and sub-hazard class, if any, of hazardous materials,
 - g) Packaging group of hazardous materials,
 - ğ) Additional risks posed by hazardous materials, if any, such as marine pollutant,
 - h) Marking and labelling details of hazardous materials,
 - ı) Properties and number of packing, cargo handling unit and container by which hazardous materials are carried, if any,
 - i) Manufacturer, shipper, transporter and recipient of hazardous materials,
 - j) Extent of resulting damage/pollution,
 - k) Number of casualties, injuries and loss, if any,
- Emergency response practices performed at the onshore facility regarding the accident.

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8.5 The procedures for reporting accidents.

8.5.1 Communication

8.5.1.1 Communication channels for the determination of the on-site and off-site communication methods and an effective management of the emergency in case of possible emergency cases in the Port Facility are specified as follows;

- Mobile Phones and the satellite phone, if available
- Computers
- Radio
- Siren
- Messengers olarak belirlenmiştir.


8.5.1.2 Internal communication is primarily provided by the radio and intercom for the emergencies occurred in the port. The communication between the Port and Ship is carried out by radio or VFH marine band radio provided by the Port.

8.5.1.3 Secure communication with the Official authorities, adjacent facilities and relevant authorities are provided as soon as possible in case of any emergency that may occur in the Port.

8.5.2 Reports

8.5.2.1 EMC shall operate a reporting system that correctly notifies Emergencies to the relevant authorities as soon as possible. EMC including the information required to be notified in an emergency case shall create this reports in a proper way.

8.5.2.2 Hazardous goods accidents must be reported to the Port Authority. The report format shall be free-form and include 8.4 details in full.

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8.6 Coordination, support and cooperation method with authorities.

8.6.1 All accidents related to hazardous materials will primarily be coordinated with Port Authority. Aid units of city / County Fire Department, DEMP and adjacent facilities will provide support and cooperation by informing the Port Authority.


8.6.2 In case of any signs of explosion, fire or emergency noticed at an adjacent facility;

Measures shall be tightened at the facility in the first place,

Teams shall be caused to get prepared for providing with the adjacent facility with assistance

8.6.3 Assistance and support teams shall be assigned for responding to any event in consideration of the urgency of situation and the severity of hazard, if there is no possibility to request help or time.

8.6.4 Preparations shall be in place for measures such as unloading and reduction of loads and removal of the vessel to anchorage site in case of any interface vessel in consideration of class, quantity and hazard risk of loads available at hazardous cargo site and on site.

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8.7 Emergency evacuation plan for the evacuation of the ship and vessels from the coastal facility in case of emergency

8.7.1 Preparation for Emergency Separation System

8.7.1.1 All emergencies should be reported to the Port Authority.

8.7.1.2 If the emergency separation of ship is decided, the safe places that the ship can be transferred under controlled conditions must be specified by the Port Authority..

8.7.1.3 In case of an emergency situation that requires emergency separation, the ship's captain and port facilities shall initiate the emergency separation by mutual agreement and inform the situation to the Port Authority as as soon as possible. A representative from Port Authority or Port Master, Terminal Manager / Business Officer, Ship Captain, Guide Captain shall come to a mutual agreement on the time and type of the separation before the immediate action where the severity and time of the emergency allow.

8.7.1.4 The ship's machinery, steering gear and Marine Systems equipment shall be ready for use immediately.

8.7.1.5 All cargo discharge, ballast discharge process must be stopped and shall be prepared for the separation process.

8.7.1.6 Salt water system of the ship must be watered and water mist must be used for strategic departments..

8.7.1.7 If the atmosphere needs vent operation, the engine room staff must be ready, all unnecessary receiver entrance must be closed, all the necessary safety measures relating to the normal operation must be fulfilled and a warning notice must be published.

8.7.1.8 If the necessary responds are over the terminal resources for all emergencies, local police or fire department must be reported immediately.

8.7.1.9 The decision to depart the ship under control is set out on the safety principle and it should cover the following requirements.

8.7.1.10 - The adequacy of the Trailers

8.7.1.11 - The ships's ability to depart with its own power

8.7.1.11.1 - The availability of a safe place that a ship can or will be taken in an emergency case.

8.7.1.11.2 - Fire-fighting competence

8.7.1.11.3 - The proximity of other vessels

8.7.1.11.4 - Fire Ropes


8.7.1.12 Fire ropes shall be kept on the top and shoulder of the ships as long as the ship is at Port Facility. The eye of the rope should be wound down to the sea level and the section on the board must be tight with at least five rounds to the bollard. Part of the top board of the rope must be stretched from the bollard. A cord that can carry the rope must be tied right before the eyes of the rope and the eye of the rope must be located in a way that it is three meters above the sea level. The eye of rope must be kept at this level while the ship is at Port Facility.

8.7.2 Realization of Emergency Separation

If all the preparations above examined and deemed appropriate, the ship will be immediately departed.

8.7.2.1 Emergency separation will be provided by the fulfillment of the following processes in order.

8.7.2.2 A close coordination and cooperation between Terminal, Ship and Port Authorities is required for each phase.

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8.7.2.3 Emergency Separation Process is as below.

- Activating an alarm
- Inform about the emergency by VHFphone
- Making the first official assessment of the situation between the ship's captain and officer of Port Facility.
- Suspension of operation
- Implementing Port facility and ship emergency plan measures
- Removal of the flexible hose connection.
- The deterioration of the current situation and availability of the aforementioned emergency separation.
- Making the assessment of the situation between the ship's captain, port facility officer, port authority or port master, guide captain
- The decision to the emergency separation
- Inform the adjacent facilities and other vessels
- The deployment of Trailers around the ship for an emergency separation, complement of the preparation and announcement of the situation
- Completing the preparations for the ship by the captain and indicating that it is ready.
- Granting approval for the opening of the release hook by the competent person.

ATTENTION!

**THE IMPLEMENTATION OF EMERGENCY SEPARATION PROCESS
MUST BE CONSIDERED AS THE LAST RESORT AND SEPARATION
HOOKS MUST NOT BE RELEASED BEFORE TAKING ALL NECESSARY
MEASURES AND FULFILLING THE CONDITIONS ABOVE.**

Post Emergency Separation

8.7.3.1 –Declaration of the decision on vessel back up and navigation route after the separation process of vessel.

8.7.3.2 –Transition / mooring of the vessel to designated area in company with towboats or its own machine


8.7.3.3 –Port Facility: Determining possible damages or deficiencies through examining the port facility

8.7.3.4 –Consideration of the time when the vessel and port facility become available for freight handling

8.7.3.5 -Sharing problems, if any, occurred during emergency separation

An agreement is reached by and between pilotage and towage organizations and onshore facility authorities regarding any fire, explosion or similar emergencies which are likely to arise during loading/unloading.

Adequate towing boats having satisfactory towing power as furnished with necessary equipment to fight fire in line with weather and marine conditions shall reach the scene as soon as possible in case of emergencies pursuant to the protocol executed with the authorized company to remove the vessel away from the facility and move it to a safe location.

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8.8 Procedures for handling and disposal of the damaged hazardous goods and wastes contaminated with hazardous goods.

8.8.1 Waste Collecting and Handling

8.8.1.1 Consequential waste are collected to waste bins taxonomically and handled to be stored properly. Waste occurred as a result of the maintenance process are handled in that scope.

8.8.1.2 Additional waste classes, if available, are provided to be integrated into the current waste classes.

8.8.2 Waste disposal

8.8.2.1 According to the hazardous or non-hazardous properties, the waste collected are isolated from the facility by selling them or using contracted organizations which are in conformity with legal recycling/disposal methods.

8.8.2.2 Opportunities of all contractors and carriers within the body of waste management in terms of appropriate methods of waste handling and/or disposal are examined.


8.8.2.3 In case of any contracting service received for handling, selling and/or disposal of the waste, those contracting companies are observed whether they fulfill their legal liabilities or perform recycling or disposal without damaging the environment.

8.8.2.4 It is an obligation to keep all the records concerning waste disposal.

8.8.3 Contaminated Packages;

8.8.3.1 These waste are empty barrels. If occurred, should be left to the contaminated package area in the dump site and Environmental Consulting Firm and Environmental Management System Supervisor contact with contracted and licensed company to send those contaminated packages through filling up the National Waste Handling Form within the time specified in the laws and regulation. Relevant documents of National Waste Handling Form and other documents are stored in environment folder.

8.8.3.2 Contaminated Waste; are used gloves, waste cottons and work uniforms. When occurred, should be collected at the waste barrel which is located at the exit of the production-warehouse department and then moved to the waste area. Within the time specified in the laws and regulation, Environmental Consulting Firm and Environmental Management System Supervisor contact with contracted and licensed company to send those contaminated packages through filling up the National Waste Handling Form. Relevant documents of National Waste Handling Form and other documents are stored in environment folder.

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8.9 Emergency drills and their records.

8.9.1 Implementation of Practices;

Emergency organization personnel should get various trainings to get ready for their duties with the purpose of providing against emergencies within the facility. If necessary, such trainings must be organized through specialized agencies. In that scope, relevant personnel have received trainings on IMDG CODE regarding Hazardous cargos and have been certified. Practices, which shall be performed in an effort to examine the efficiency of Emergency Plans and be prepared for facts, have to be planned in a way that they will be performed considering the worst scenario likelihood within the facility.

8.9.2 Practice Scenarios;

Planning practices needs two anticipations one of which is a single incident that the port experience and the other is the worst scenario with the combination of these single incidents. In accordance with the scenarios prepared, practices are ensured to be performed in the fastest and most efficient way possible.

8.9.3 Emergency Practices which will be performed within the facility;

8.9.3.1 Have to be indicated within annual training plans.

8.9.3.2 May be planned as local or general responses,


8.9.3.3 Safety, Spillage, etc. may be combined in practice scenarios,

8.9.3.4 Practices can be performed with or without notices.

8.9.3.5 Practices are based upon different emergency scenarios.

8.9.3.6 A practice may be actually performed as it can be negotiated as a desk work or a seminary,

8.9.3.7 Each practice is prepared with scenarios of different hours, days, seasons and incidents.


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8.10 Information on fire protection systems.

Emergency and fire equipment is given as follows:

Fire hydrants, Fire extinguishers, Fire cabinets and Fire hoses, On-site fire alarm detectors, Electrical and diesel fire pumps

The fire inventory is as in the Emergency Plan.

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8.11 Procedures for approval, inspection, testing, maintenance and availability of the fire protection system.

8.11.1 Fire-Protection Water Tanks and Fire-Protection Water

8.11.1.1 The storeroom should be cleaned up at least once a year by discharging the content in order to prevent possible hazards from moss and mud built up in the bottom and sides in the event of fire. Inlet valves, check valve and filters are maintained during the discharge process of pondages.

8.11.1.2 In case of sudden drawdown on water level, it must be checked for a seep or leakage and repaired if necessary.

8.11.1.3 Following the annual check, if necessary, internal and external cleaning and maintenance should be performed in sealed stores.

8.11.2 Fire-Protection Water Pumps

8.11.2.1 Points to take into consideration regarding operation of pumps and troubleshooting in addition to scheduled maintenance are specified below.

8.11.2.1 Pumps, stuffing boxes, pressure bolts are checked interrelated and it is ensured whether the pump can be turned up manually with ease or not. Water drops from stuffing box during the operation of the pump is typical. In order to prevent such water flow to the ground, the threaded opening under the stuffing box must be connected to the drainage with a tube.

8.11.2.2 Fire-protection water pumps must be operated and recorded at least 1 hour a week.

8.11.2.3 Pump and suction pipe are ensured to be completely full of water. If it is not, water filling plug and bleed valve must be opened and such parts mentioned must be filled up with water until they overflow and when the water stops at the plug level, the plug must be tightened properly.


8.11.2.4 Pump motor will draw excessive current because of the starting current at the early stages of the operation. As a result of the simultaneous operation of all pumps, cutout switches may be tripped or diesel generators may be broken down seriously because of the heavy current. Therefore, limit relays that regulates the transition -from the star located at the shielded switch which drives the pump motors to triangle- must be arranged according to the number of pumps and the amount of pumps to be operated simultaneously and with respect to different and appropriate time intervals and timely initiation of pumps is provided.

8.11.2.5 After performing aforesaid preliminaries and checks, pumps are operated by pressing the drive switches. During the operation, electric motor voltage and the ampere driven must be checked from time to time. If the ampere driven is high at normal operation, a troubleshooting is needed. There may be a mechanical breakdown or force at the pump or motor. Substandard voltages may be hazardous for motor.

8.11.2.6 Monometers must be checked regularly and one or more pumps must be stopped in case of excess pressure increases.

8.11.2.7 Delivery pipes of pumps must be equipped with valves initially and check valves thereon.

8.11.2.8 If the check valve of the failed pump on the delivery pipe is blocked by materials such as paper, garbage, pieces, moss, mud and interrupts the proper close of the check valve, a part of the water pumped by the other pumps is pumped to the pool

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while passing through this failed pumps and suction pipes. This failure blocking the water discharge must be fixed in condition of fire occurrence. If a spinning is detected on some of the couplings of failed pumps during the operation of a part of the pumps, it must be interpreted as a sign for the above mentioned failure.

8.11.2.9 It must be ensured that the pump and the engine are at the right direction during the operation. For that reason, return path must be drawn on the coupling and control must be performed accordingly.

8.11.2.10 The bearings of the pump and engine must not be hotter than hands can resist. If the heat is high, it may be resulted from an internal mechanical forcing or coupling maladjustment. In such situations pump must be stopped and the failure must be corrected immediately.

8.11.2.11 For pumps driven by diesel engine, starting the engine must be carried out in line with the instructions.

8.11.2.12 In condition that a deficiency or malfunction is detected as a result of control, it is fixed by the responsables.

8.11.3 Sprinkler System

8.11.3.1 The most important point and maintenance to do about sprinkler installation is preventing sprinkler head to be congested. To supply this; sprinkler should be worked according to standards/legislations and should be sure that it is working. Sufficient sprinkler head should be keep in every facility and in case of failure, it should be replaced with new ones, broken ones should be towed by repairing.

8.11.4 Fire Protection Hydrant Installation

8.11.4.1 Entering rain water into fire-protection hydrant hose closets should be prevented; hoses should be without fracture, solid and constricted enough. At least one of the hoses should be maintained as always connected to fire protection valve.


8.11.4.2 Fire-protection valves should be impermeable and working. Broken nozzles, valves and hoses should be replaced immediately and faults should be repaired and towed. Therefore, sufficient hose, nozzle, fire-protection valve, clamp, sleeve and spare materials belong to those should be kept. Waiting the failure is not allowed with any reason at firefighting equipment.

8.11.4.3 While determined failures were fixing after drills, running fire-protection hoses shouldn't be put into closet with water in it. Facilities should supply proper hose suspension to drain the water off in hoses and to be dry and facilities shouldn't replace before ensuring that hose is quite dry. If sea water was ejaculated by hoses, firstly inside of them should be washed by fresh water and then they should be dried at a windy place.

8.11.4.4 All pipes belong to installation of sprinkler and fire-protection hydrants are has to be controlled in general every three months, rusty parts should be painted, decayed parts should be replaced, valves and retched valves should be controlled and failure should be fixed.

8.11.4.5 If any lack or malfunction is determined as a result of all fire-protection hydrants, hoses, and nozzles control it is fixed by related liable.

8.11.5 Portable Extinguishers

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8.11.5.1 Sufficient quantity of spare device should always be in facility storages for failure, control and maintenance. Instead of extinguishers those were used for purposes above should be replaced with reserves.

8.11.5.2 All extinguishers are had visual test monthly and inspected. After control, extinguishers' upper surface is marked. During the control, especially extinguishers with dry powder are turned down and slightly hit the base, so powder in pipe is allowed to move. Otherwise, powder in extinguishers stays at same location for a long time can be hardened by subsiding to base. After the result of control; if any lack or malfunction is determined, it is fixed by related liable.

8.11.5.3 Extinguishers are inspected annually in general by firm according to TS ISO 11602-2 Fire Protection: Portable and wheeled extinguisher standard. Extinguishers are tested by related firm in ten years most intervals, chemical powder is inspected at the end of the 4th year.

8.11.6 Protection against freezing.

8.11.6.1 Protection of Generators


8.11.6.1.1 By outside temperature's decreasing under +4C, water may start to freeze. Therefore, radiator's generators with water-cooled motor should be ensured with antifreeze.

8.11.6.2 Protection fire-protection water pumps.

8.11.6.2.1 Fire-protection water pumps and absorption pipes are always full with water. So ambient temperature shouldn't be under +4 C.

8.11.6.3 Protecting of fire-protection distribution pipes.

8.11.6.3.1 Main pipes and branch pipes are had to be protected against the freezing about hydrant sinks. So, lines are protected against freezing by isolation or being floored underground.

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8.12 The measures to be taken in case of failure on fire protection systems.


8.12.1 The facility is a system with established alternative competency which backs up firefighting equipment.

8.12.2 The support of adjacent facilities, Fire departments and AFAD (Disaster and Emergency Management Directorate) shall be sought in cases where the facility's own fire fighting equipment is inadequate or out of service.


8.12.3 Other hazardous and combustible materials / vehicles, which are likely to be affected from fire, shall be removed away from the area, if possible.

8.12.4 A necessity may arise to determine under which conditions assistance and support are provided and their scope.

8.12.5 The capabilities of towing boats or marine vehicles featuring marine fire extinguishing system available in the area should be taken into consideration.

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8.13 Other risk control equipment.

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9 SAFETY AND HEALTH AT WORK MEASURES

9.1 Occupational health and safety measures.

Harbor Structure Management is obligated to take all necessary measures to prevent employees to be affected of these substances, if this is not possible; minimizing it and to protect employees from the danger of these substances when working with chemical substances.

9.1.1 Risk assessment

9.1.1.1 Harbor Structure Management is obligated to do a risk assessment in accordance with 29/12/2012 dated, 28512 numbered Occupational Health and Safety Regulation provisions published at official gazette to determine if there is dangerous chemical substance at Harbor Structure and if there is; determining negative effects in terms of employees' health and safety.

9.1.1.2 Following details are specifically considered at risk assessment to be made at studies with chemical substances:

9.1.1.2.1 Danger and harms of chemical substance in terms of health and safety.

9.1.1.2.2 Turkish material safety verse form (SDS) to be provided from sellers, manufacturers or importers.

9.1.1.2.3 Duration, type and level of contagion.

9.1.1.2.4 Quantity, conditions of usage and frequency of usage of chemical substance.

9.1.1.2.5 Vocational exposition limit values and biological limit values given at annexes of this regulation

9.1.1.2.6 . Effect of preventive measures to be taken or taken.

9.1.1.2.7 If available, results of last health surveillance.

9.1.1.2.8 Each of these substances and their interactions with each other at works that was worked in with more than one chemical substances.

9.1.1.3 Harbor Structure Management obtains extra information from supplier or other sources that is necessary for risk assessment. This information also includes special risk assessments involved in current regulations if available intended for users.

9.1.1.4 A new activity includes dangerous chemical substance is only started after taking all types of measures those were specified by doing risk assessment.

9.1.1.5 Measures to be taken at studying when dangerous chemical substances.

9.1.1.5.1 Risks in terms of employees health and safety when studying with dangerous chemical substances are disabled or minimized with following measures:

9.1.1.5.2 Proper regulation and organization of work are done at Harbor Structure.


9.1.1.5.3 Studies with dangerous chemical substances are made with minimum number of employees.

9.1.1.5.4 Substance quantity and exposition period employees will be exposed is allowed to be at minimum level.

9.1.1.5.5 Chemical substance quantity to be used at Harbor Structure is kept at minimum level.

9.1.1.5.6 Work place building and extensions are always kept clean and neat.

9.1.1.5.7 Proper and sufficient conditions are provided for employees' personnel cleaning.

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9.1.1.5.8 Necessary regulations are made to store, transport, use and process dangerous chemical substances, waste and residuals properly at Harbor Structure.

9.1.1.5.9 Safe or less dangerous chemical substance is used instead of dangerous substance in terms of employees' health by using substitution method. If substitution method can't be used because of specification of the work, according to risk assessment result and with order of precedence, following measures are taken and risk is reduced:

9.1.1.5.10 Proper process and engineering control systems are chosen by also considering technological developments at studying with dangerous chemical substances involving maintenance and repair works those can be hazardous in terms of employees' health and safety.

9.1.1.5.11 Block protection measures like installing sufficient ventilation system and proper work organization are taken to prevent risk at its source.

9.1.1.5.12 In case of taken measures for protecting employees collectively against chemical substances' negative effects are not sufficient, personnel protection methods are adopted with these measures.

9.1.1.6 Sufficient control, supervision and inspection is made to allow taken measures to be active and perpetual.


9.1.1.7 Harbor Structure Management provides analysis and measurements of chemical substances regularly those could be hazardous for employees health. If any changing is realized at conditions those can effect Harbor Structure employees' exposition to chemical substances, these measurements are repeated. Measurement results are assessed by considering vocational exposition limit values specified in this Regulation annexes.

9.1.1.8 Harbor Structure Management, also considers specified measurement results. Every situation vocational exposition limit values are crossed, Harbor Structure Management takes protective and preventive measures to fix this as soon as possible.

9.1.1.9 On condition of remaining Regulation Provision about Protecting Employees from Dangers of Explosive Places secret, Harbor Structure Management makes administrative arrangements and takes technical measurements according to following order of precedence in accordance with turnover's specification involving to process, store and transport chemical substances, to prevent interacting chemical substances' touching each other mutually on the purpose of protecting employees from dangers which originate from chemical substances' physical and chemical feature, by basing results of risk assessment and risk avoidance principles:

9.1.1.9.1 For inflammable and explosive substances to reach dangerous concentration and having dangerous quantity of chemically unstable substances are prevented at Harbor Structure. If this is not possible,

9.1.1.9.2 Having inflammable sources those can cause fire or explosion at Harbor Structure. Conditions those can cause harmful effect of chemically unstable substances and mixtures are disabled. If this is also not possible,

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9.1.1.9.3 . Required measures are taken to minimize or prevent employees to be effected by chemically unstable substances' and mixture's harmful effects in case of fire or explosion originate from inflammable or explosive substances.

9.1.1.10 Protective systems those were provided for protecting work equipment and employees, are designed, produced and supplied in accordance with legislation in force in terms of health and safety. Harbor Structure Management provides all equipment and protective systems to be used at explosive places, to be in accordance with provisions of Regulation About Equipment an Protective Systems Used at Probable Explosive Places (94/9/AT) published at 26392 4 repeated numbered and 30/12/2006 dated official gazette

9.1.1.11 Arrangements to reduce effect of explosion pressure are made.

9.1.1.12 Facility, machine and equipment are allowed to be always under control.

9.1.1.13 Minimum safety distances are complied with placing storage tanks those have liquid oxygen, liquid nitrogen and liquid argon at work places.

9.1.2 Emergencies

9.1.2.1 Especially following details are considered in case of emergencies originate from dangerous chemical substances at Harbor Structure on condition of keeping details specified in Regulation about Emergencies at Workplaces published 28681 numbered and 18/6/2013 dated Official Gazette as a secret :


9.1.2.1.1 Preventive measures to reduce negative effects of emergencies are taken immediately and employees are informed about the situation. Necessary studies are done to return emergency to normal and only employees assigned at emergencies to do maintenance, repair and compulsory works and teams came to scene from another place are let to get into effected area

9.1.1.1.2 Personal protective equipment and special security equipment is given to the people allowed to enter the affected area and it is being sure that they are using them as long as the emergency situation goes on. People who do not have personal protective equipment and special security equipment are not allowed to enter the affected area.

9.1.2.1.3 Information about the Dangerous chemicals and emergency situation intervention and evacuation procedures are all ready for use. Workers employed for the cases of emergency at the Port Facility and the establishments active in first aid, emergency medical attention, saving and firefighting outside the work place should be provided with these information and procedures easily. These information include;

For the workers employed for the cases of emergency at the Port Facility and the establishments active in first aid, emergency medical attention, saving and firefighting outside the work place to be ready beforehand and so they can practice the appropriate attention, the danger resulting from the work done, precautions to take and works to be done,

A special danger or information about the works needed to be done that are likely to happen in an emergency situation,

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9.1.3 Workers' education and informing them

9.1.3.1 Port Facility Management, provided that the provisions mentioned on the Regulation 15/5/2013 dated 28648 numbered Occupational Health and Safety Education Procedures and Principles remain hidden, ensures the workers' and their representative's training and informing. This training and informing especially include the aspects mentioned below;

9.1.3.1.1 Information gained as a result of the risk evaluation.


9.1.3.1.2 Information about the dangerous substances that may occur or taking place at the Port Facility and about the recognition of these substances, health and security risks, occupational diseases, occupational exposure level values and other legal regulations.

9.1.3.1.3 Necessary precautions and things to do so that the worker's do not danger themselves or the other workers.

9.1.3.1.4 Information on the Turkish material safety data sheets supplied from the manufacturer for the dangerous chemical substances.

9.1.3.1.5 Information on labelling/locking the parts, covers, pumping system and suchlike instalment where the dangerous chemical substances are according to the regulations

9.1.3.2 The training and information to the workers and their representatives on the works with the dangerous substances are a training supported by a verbal or written instruction due to the risk degree resulting from the risk evaluation done and its type. These instructions changes according to the changing conditions.

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9.2 Information about the personal protective clothes and procedures to use them

Personal Protective Devices of the Response Teams

Level A

Usage area : Situations where the skin, breathing, eyes and etc. need to be protected in a high standard – gas proof

Positive pressured Tube Breathing Apparatus– SCBA

Protective clothing against the chemicals

Gloves which are chemical proof from inside.

Gloves which are chemical proof from outside.

Boots or long boots, chemical proof, with steel heels.

Thermal underwear, long sleeve and cuffed

Hard Cover

Long sleeved

Double sided wireless connection (No spreading sparks)

Level B

The minimum level needed for the entry and exit to the scene, rather for the liquids to be spilled or scattered.

Positive pressured Tube Breathing Apparatus– SCBA

Protective clothing against the chemicals

Gloves which are chemical proof from inside.

Gloves which are chemical proof from outside.

Boots or long boots, chemical proof, with steel heels.

Hard Cover

Double sided wireless connection (No spreading sparks)

Face mask

Level C

Used when the chemicals in environment are known, when the concentration is decided, when it is decided that the skin and eyes will not get harmed. However continuous measure should be done.

→ Full mask, air cleaning filter

→Protective clothing against the chemicals

→Gloves which are chemical proof from inside.

→Gloves which are chemical proof from outside.

→Boots or long boots, chemical proof, with steel heels.


→Hard Cover

→Double sided wireless connection (No spreading sparks)

→Face mask


Level D

Work clothes (emergency intervention team). Requires long sleeved and security shoes/boot. Other Personal protection equipment changes due to the condition of the event. If a problem is to occur about the skin, entries to the scene with these kinds of clothes should not be done. .

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10 OTHER POINT

10.1 Validity of the Hazardous Substances Compliance Certificate.

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10.2 Responsibilities of the Dangerous Goods Safety Consultant

As in section 2.4.

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10.3 Matters for carriers of the hazardous substances arriving/leaving coastal facility by land (matters on required documents that must be available in the road vehicle at the entrance/exit of port or coastal facility area, equipment and tools required for this vehicles, speed limits in the port area etc.).

10.3.1 Bulk dangerous cargoes

10.3.1.1 Name of the consignor (shipper) and date of delivery to the port area, normally not less than 24 hours before arrival;

10.3.1.3 for bulk dangerous cargoes: the product name and any other information required by the relevant IMO code; and

10.3.1.4 the name of the ship into which the dangerous cargoes are to be loaded (if applicable), the ship's agent and the port.

10.3.2 Necessary certificates


Hazardous Cargo Declaration, Hazardous Cargo Transport Dispatch, Multi Mode Hazardous Cargo Form, Hazardous Cargo Manifest, Packaging and Container/Vehicle Loading Certificate, Safety Data Sheet, carrying certificate showing exemption for the shipping under ADR/RID/IMDG Code 3.4 and 3.5, SRC 5 certificate appropriate and valid for transport with regard to shipping under ADR, ADR written instruction, Vehicle Conformity Certificate appropriate and valid for carriage, transport document, CSC Certificate for the shipping made with container, the certificate showing eligibility of the tree in case of using heat treated tree with regard to transport or loading safety and cargo transport unit (CTU), cargo safety certificate signifying that container or the cargos in vehicle are secured within the scope of IMDG Code,

As regards the cargos to which fumigation application is made or contain hazardous gas in the cargo transport unit leaving port facility and the cargo transport units arriving port facility, the result of risk evaluation or transport conformity certificate if gas measurement is done,

Without lack of compulsory documents regarding the transport listed above, hazardous cargo that arrives port facility and leaves port facilities cannot be shipped. The cargos not taken under security in appropriate way within the scope of IMDG Code is treated as hazardous cargo too.

10.3.3 Speed Limit in Port Facility

Speed limit in our port facility is 20 km.

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10.4 Matters for carriers of the hazardous substances arriving/leaving coastal facility by sea (matters on day/night signals to be shown by ships carrying hazardous goods and vessels, cold and hot work procedures in ships and so on.)

10.4.1 Arrival by Sea

10.4.1.2 Hazardous bulk cargo (liquid or solid);

10.4.1.2.1 name and IMO number of ship, agency and estimated time of arrival (ETA), 24 hours at the latest from arrival normally;

10.4.1.2.2 a list showing product name of hazardous cargos and other information necessitated with related IMO Code

10.4.1.2.3 A valid International Conformity Certificate for Bulk Transport of Hazardous Chemicals or a valid Conformity Certificate for Transport of Bulk Hazardous Chemical, whichever is appropriate, International Pollution Prevention Certificate for Liquid Bulk Substances hazardous for Health (NLS Certificate) and/or International Fuel Pollution Prevention Certificate should be made available for cargo;

10.4.1.2.4 Hazardous cargos to be left in ship should be indicated in a way to refer the numbers in list;


10.4.2 Departure by Sea

10.4.2.1 hazardous bulk cargos (solid):

10.4.2.1.1 name of ship and IMO number of ship, agency and estimated time of departure (ETD) as necessitated by regulatory boards;

10.4.2.1.2 a list showing product name of hazardous bulk cargos and other information necessitated by related IMO Code

10.4.2.1.3 A valid International Conformity Certificate for Bulk Transport of Hazardous Chemicals or a valid Conformity Certificate for Transport of Bulk Hazardous Chemical, whichever is appropriate, International Pollution Prevention Certificate for Liquid Bulk Substances hazardous for Health (NLS Certificate) and/or International Fuel Pollution Prevention Certificate should be made available for cargo;

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10.5 Additional points will be added by the port facility.

10.5.1 Training

10.5.1.1 Management

10.5.2.1 Management should ensure that all shipboard and shore personnel involved in the transport or handling of dangerous cargoes or in the supervision thereof are adequately trained, commensurate with their responsibilities within their organization.

10.5.2.2 Management at all levels should exercise day-to-day responsibility for health and safety. In order to draw up safe operational procedures for the transport and handling of dangerous cargoes, management should carry out an assessment of the risks involved. In certain cases a quantified risk assessment may be necessary.

10.5.1.2 Personnel (cargo interests, port operators and ships)

10.5.1.2.1 Every person engaged in the transport or handling of dangerous cargoes should receive training on the safe transport and handling of dangerous cargoes, commensurate with his responsibilities.

10.5.1.3 Shore-based personnel

Should receive general awareness/familiarization training, function-specific training and safety training

10.5.2 Training content

10.5.2.1 General awareness/familiarization training

10.5.2.1.1 Every person should receive training on the safe transport and handling of dangerous cargoes, commensurate with his duties. The training should be designed to provide familiarity with the general hazards of relevant dangerous cargoes and the legal requirements. Such training should include a description of the types and classes of dangerous cargoes; marking, labelling and placarding, packing, segregation and compatibility requirements; a description of the purpose and content of the transport documents; and a description of available emergency response documents.

10.5.2.2 Function-specific training

10.5.2.2.1 Every person should receive detailed training concerning specific requirements for the


10.5.2.2.2 transport and handling of dangerous cargoes which are applicable to the function that he performs.

10.5.2.3 Safety training

10.5.2.3.1 Each person should receive training commensurate with the risks in the event of a release of dangerous cargoes and the functions he performs, on:

10.5.2.3.2 Such training should be provided or verified upon employment in a position involving the transport or handling of dangerous cargoes and should be periodically supplemented with retraining, as deemed appropriate by the regulatory authority.

10.5.2.3.3 Records of all safety training undertaken should be kept by the employer and made available to the employee if requested.

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10.6 Accident Prevention Policy

İPRAGAZ A.Ş. management, we are aware of that the operations realized in our port have the potential that will lead to accidents inherently. However, we believe all accidents may be prevented. Therefore, we undertake to manage operation ideally to protect subcontractors, visitors, neighbours and environment at the highest level through preventing accidents.

With the aim of preventing accidents and mitigate the effects in the direction of İPRAGAZ A.Ş. Quality Management Systems, as İpragaz Dörtüol Port, we will apply the policies about

- taking high level security measures for human and environment around Port facility and procuring all resources for this purpose,
- making the risk evaluation based on quantitative analysis related to ordinary and extraordinary operation and keeping these evaluations updated continuously with the purpose of determining and assessing accidents
- having performed the arrangements covering maintenance, repair and temporary stopping related to detected risks and preparation of requisite procedures
- following technological development and providing support required for continuous improving of security measures in facilities with the aim of preventing accidents and mitigate the effects
- making necessary arrangements required for design of new facility, process along with planned changes and having performed risk evaluations absolutely before realization and assessing acceptability
- determining emergencies that will be detected before with systematic analysis, preparing emergency plans for these emergencies and reviewing with drills following realization of audit regularly
- tracking performance of system within the framework of procedures to evaluate conformity to the targets identified with Quality Management Systems, in case of failing to provide conformity, searching corrective activities
- evaluating efficiency and conformity of Quality Management Systems periodically and systematically, documentation, certification, performing review by us as top management and giving support for continuous improvement of Quality Management Systems
- employing the personnel who have knowledge, education and experience convenient for the positions that will affect safety and security of operational job processes within organization,
- ensuring that our employees in charge develop themselves constantly by means of giving trainings,
- adhering to national and international law, regulation, bylaws and standards
- ensuring health and securities of employees, contractors, visitors and neighbours and protection of environment whereby preventing accidents and eliminating the effects systematically through taking necessary measures and searching potential incompatibilities with policy

AS MANAGEMENT AND ALL EMPLOYEES.

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10.7 Hot Work Procedure

1. No permit is given for the hot works to be done aboard ship. However, in necessary cases, after taking permits in the direction of legal legislations by ship agency, it will be realized under the control of port facility.

2. Before starting to hot works and procedures in our port facility, written permit regarding applicability of hot works in question will be taken from port presidency. With abovementioned permit, the place where hot work and procedures will be performed and related details and additionally safety measures to be applied will be specified on Hot work form.

3. Hot Work Form covers the following.

a) with the aim of being sure about that the areas on which work is to be done is no burning and/or explosive environment and insufficient in terms of ventilation and oxygen, auditing frequently the area and adjacent areas where work is to be carried out including the tests applied by accredited testing organizations,

b) removing hazardous cargos and other combustible materials from working area and adjacent areas (lime, sludge, residue and other combustible materials are included in the substances to be removed from the area in question)

c) protecting efficiently against accidental ignition of combustible building materials (i.e., girders, wooden partitions, floors, doors, wall and ceiling coatings)

ç) sealing and ensuring impermeability of open pipes, pipe transitions, valves, joints, gapes and open parts with the purpose of preventing spreading of flame, spark and hot particles from working areas to adjacent areas or other areas

4. warrant of the hot work to be done and a plate on which the safety measures to be taken are written will be hanged in working area and entrances of all working area. Warrant and safety measures should be visible easily and will be understandable clearly by everyone who will conduct hot works.


5. While doing hot works, attention should be paid to the following matters:

a) controls will be carried out with the aim of confirming that no current condition have changed in working environment.

b) While hot works are performed, at least one fire tube or other fire extinguishing equipment shall be made ready, so as to be used instantly with their all apparatus in a venue to be reached easily.

6. In the course of hot work and procedures, when the works in question are completed and during enough time following completion, efficient fire control shall be made in the area on which hot work is conducted and the adjacent areas where hazard will emerge owing to heat transfer.

7. Necessity of applying for the document titled "International Safety Guide for Oil Tankers and Terminals (ISGOTT)" particularly for additional more detailed information and procedures pertaining to hot works and procedures will be taken into consideration every time.


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| | |
|---|---|
| Risk Assessment | |
| Location of hot work: Area / Location: _____ Special access restrictions (due to the task involving a specific welding type or the location being a hazardous area, confined space, etc): _____ | |
| Reason for hot work: Work activity description: _____ Likely ignition source type(s): <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Flame (welding, soldering, brazing, etc) <input type="checkbox"/> Hot Object (metal surface, plate, etc) </div> <div> <input type="checkbox"/> Spark or slag (grinding, cutting, friction tools, welding, etc) <input type="checkbox"/> Other: _____ </div> </div> | |
| Hazard identification, risk analysis and control measure selection: <div style="float: right; font-size: small;">Add an additional page if the space below is insufficient.</div> | |
| Specific Hot Work Issues: (tick appropriate) | <div style="border: 1px solid black; padding: 2px;"> <input type="checkbox"/> The hot work is to be solely undertaken by a contracted party personnel and a detailed work method statement / risk assessment has been previously prepared, reviewed by is attached to this Form. </div> <div style="border: 1px solid black; padding: 2px;"> <input type="checkbox"/> The hot work is to be solely undertaken by personnel as per the specific hot work issues detailed below. </div> |
| <div style="float: right; font-size: small;"> Attach documentation & proceed to Section 2 on the following page. Complete the Risk Assessment below. </div> | |


| Risk Assessment Guide | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|--|-----|--|------|--------------|--|--------------|--|--|-----|-----|-----|------|-----|------------|----------------|------------|----------------|---|---|---|--------|---|--------|---|---|---|----------|---|----------|---|---|---|-----------------|---|-----------------|---|---|---|---|---|
| Step 1 – Consider Consequences | | Step 2 – Consider Likelihood | | Step 3 – Calculate Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What are the consequences of this hazard occurring? Consider what is the most probable consequence (below) with respect to this work hazard. | | What is the likelihood (below) of the hazard consequence in Step 1 occurring. | | 1. Take Step 1 rating and select the correct column. 2. Take Step 2 rating and select the correct line. 3. Use the risk score where the two ratings cross on the matrix below. H = High, S = Serious, M = Medium, L = Low | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Extreme Multiple fatalities or permanent injuries Critical Single fatality or permanent injury Major Medical treatment or lost time injury Minor First aid treatment Insignificant Incident or near miss – no treatment | | Almost Certain Is expected to occur in most circumstances Likely Will probably occur at least once Possible Event might occur at some time Unlikely / Event not expected to occur or only in exceptional circumstances Rare | | <table border="1" style="font-size: x-small;"> <tr> <th colspan="2" rowspan="2"></th> <th colspan="5">Consequences</th> </tr> <tr> <th>Ins</th> <th>Min</th> <th>Maj</th> <th>Crit</th> <th>Ext</th> </tr> <tr> <th rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">Likelihood</th> <th>Almost Certain</th> <td>M</td> <td>S</td> <td>H</td> <td>H</td> <td>H</td> </tr> <tr> <th>Likely</th> <td>M</td> <td>M</td> <td>S</td> <td>H</td> <td>H</td> </tr> <tr> <th>Possible</th> <td>L</td> <td>M</td> <td>M</td> <td>S</td> <td>S</td> </tr> <tr> <th>Unlikely / Rare</th> <td>L</td> <td>L</td> <td>M</td> <td>M</td> <td>S</td> </tr> </table> | | | | Consequences | | | | | Ins | Min | Maj | Crit | Ext | Likelihood | Almost Certain | M | S | H | H | H | Likely | M | M | S | H | H | Possible | L | M | M | S | S | Unlikely / Rare | L | L | M | M | S |
| | | Consequences | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Ins | Min | Maj | Crit | Ext | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Likelihood | Almost Certain | M | S | H | H | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Likely | M | M | S | H | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Possible | L | M | M | S | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Unlikely / Rare | L | L | M | M | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1" style="font-size: x-small;"> <tr> <th colspan="2" rowspan="2"></th> <th colspan="5">Consequences</th> </tr> <tr> <th>Ins</th> <th>Min</th> <th>Maj</th> <th>Crit</th> <th>Ext</th> </tr> <tr> <th rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">Likelihood</th> <th>Almost Certain</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Likely</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Possible</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Unlikely / Rare</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | Consequences | | | | | Ins | Min | Maj | Crit | Ext | Likelihood | Almost Certain | | | | | | Likely | | | | | | Possible | | | | | | Unlikely / Rare | | | | | | | |
| | | Consequences | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Ins | Min | Maj | Crit | Ext | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Likelihood | Almost Certain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Likely | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Possible | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Unlikely / Rare | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Hazard (List the hazards relating to the work) | Controls (List the controls to manage each of the hazards) | Personal Protective Wears | Responsible Party (List the role, contractor, competency &/or prescribed occupation responsible for implementing the controls) | Risk Assessment (With controls in place: High, Serious, Medium or Low) |
|---|---|---------------------------|---|---|
| | | | | |
| | | | | |

| | | | |
|-----------------------------------|-----------------|-------------|--|
| Risk Assessment Personnel: | | | |
| Risk Assessment Completed by: | | | |
| Name: _____ | Employer: _____ | Date: _____ | |
| Name: _____ | Employer: _____ | Date: _____ | |

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| Section 2 – Hot Work Permit | | | |
|--|--------------------------|--------------------------|--|
| As per the method of hot work and location described in Section 1, identify control requirements in the relevant parts below. | | | |
| General Hot Work / Ignition Controls | | | |
| Identify those general hot work and ignition controls required to be undertaken as part of the hot work: (identify as yes or not applicable) | Yes | NA | Control |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Fire extinguishers supplied by the workgroup / contractor are to be located immediately adjacent to the hot work area and within 10m (building / fixed location fire extinguishers are <u>not</u> to be relied upon) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Catch mats or boards are to be positioned over grid-mesh, flooring, grates to catch sparks or slag |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Combustible and flammable materials or fuel sources are required to be cleared from the area (consider a 15m area around the hot work where practicable and include surfaces below & above the work area) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Drains, cable racks, electrical cables and other heat/fire sensitive items are to be covered (consider a 15m area and use fireproof blankets, catch boards and approved covers as applicable) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A water hose is to be run to the job location and primed ready for use (where appropriate for work locations outdoors and in areas clear of electrical equipment) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A Fire Watcher is required to watch the area during and/or post work to monitor fire risk, sparks, slag, hot objects (consider for work that is arc welding, oxy-cutting or likely to present an ignition hazard post work, and for work in hazardous areas, in confined spaces, outdoors, in windy conditions): |
| | | | <input type="checkbox"/> During Work, and/or <input type="checkbox"/> Post Work for a time period of _____ minutes |
| Specific Hot Work / Ignition Controls | | Yes | NA |
| The hot work is to be undertaken on or adjacent to plant that will require an isolation (such as services, pipes, tanks, pressure vessels) | | <input type="checkbox"/> | <input type="checkbox"/> |
| A fixed fire protection or detection system will need to be taken out of service (approval is required for the impairment and the Fire System Log Book is to be filled in – see also BAC Authorisation below; approval contacts include: | | <input type="checkbox"/> | <input type="checkbox"/> |
| The work area will require specific cleaning, purging, ventilating or pre-work atmospheric monitoring (due to flammable/explosive vapours, dusts, liquids or solid residues in the work area / location) | | <input type="checkbox"/> | <input type="checkbox"/> |
| The work area will require pre-work cleaning, stripping, surface preparation, or atmospheric monitoring during works (as a result of surfaces / coatings that may create harmful emissions when heated or cut) | | <input type="checkbox"/> | <input type="checkbox"/> |
| The nature of the work requires specific respiratory protection to be worn | | <input type="checkbox"/> | <input type="checkbox"/> |
| The nature of the work requires specific controls to be implemented to protect gas leads or other sensitive plant items involved in the work | | <input type="checkbox"/> | <input type="checkbox"/> |
| The hot work involves arc-welding whereby specific controls relating to ensuring electrical safety will be required | | <input type="checkbox"/> | <input type="checkbox"/> |
| Additional Hot Work Controls within Confined Spaces <input type="checkbox"/> NA (Not Applicable) | | | |
| Controls: | | Yes | NA |
| Locate equipment outside the space where practicable (such as gas cylinders, hoses, etc unless involved with respiratory devices) | | <input type="checkbox"/> | <input type="checkbox"/> |
| Extraction fan inlet is to be located as close as practicable to the contamination source | | <input type="checkbox"/> | <input type="checkbox"/> |
| Contaminants are to be expelled from the space (so that they cannot be recirculated and will not harm other workers) | | <input type="checkbox"/> | <input type="checkbox"/> |
| As arc-welding activities are to be suspended for substantial periods, power sources will need to be de-energised, electrodes removed from holders and holders placed so that accidental contact or arcing cannot occur | | <input type="checkbox"/> | <input type="checkbox"/> |
| As gas welding/cutting activities are to be suspended for substantial periods, torch and cylinder valves are to be closed with the torch and hose connections removed from the space and depressurised | | <input type="checkbox"/> | <input type="checkbox"/> |
| Completion Hot Work <input type="checkbox"/> NA (Not Applicable) | | | |
| Controls: | | Yes | N/A |
| After the end of the job is controlled area for at least half an hour. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Field is checked for at least eight hours and one hour intervals. | | <input type="checkbox"/> | <input type="checkbox"/> |
| There is no need to do control after hot working. | | <input type="checkbox"/> | <input type="checkbox"/> |
| Permit Request: | | | |
| Name: _____ | Signature: _____ | Date: _____ | Time: _____ |
| Approved | | | |
| Name: _____ | Signature: _____ | Date: _____ | Time: _____ |

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10.8 Responsibilities of Personnel in Operation

10.8.1 Operation Officer

10.8.1.1 Acts according to the checklists in 10.9.

10.8.1.2 A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility and the representatives of operation, Field planning, HSE unit, TMGD and other related persons shall participate to the meeting.

10.8.1.3 If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced.

10.8.1.4 If it is required to notify the Port authority, the situation shall be notified to the Port authority in writing by specifying the reasons.

10.8.1.5 Number of equipments and cranes, teams and shifts to be used shall be specified at this meeting.

10.8.1.6 Organize the work order with the 2nd Cap.

10.8.1.7 Ensure that the cargo handling is made according to the approved cargo plan With the Planning Specialist

10.8.1.8 Every person engaged in the handling of dangerous cargoes exercises reasonable care to avoid damage to cargo transport units.

10.8.1.9 Whilst dangerous cargoes are being handled, precautions are taken to prevent unauthorized access to handling areas.

10.8.1.10 If there is any loss of containment of dangerous cargo, every practical step is taken to minimize risks to persons and adverse effects to the environment.

10.8.2 Shift Supervisor


10.8.2.1 Acts according to the checklists in 10.9.

10.8.2.2 The personnel equipped with the necessary protective equipment check before the operation.

10.8.2.3 The shift superintendent will be responsible from controlling the work security, control of equipments, entry and exit of outsiders, safe handling of the cargo, environmental cleaning and duly performance of these works.

10.8.2.4 Organize the work order with the 2nd Cap.

10.8.2.5 Ensure that the cargo handling is made according to the approved cargo plan.

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10.8.2.6 If there is any loss of containment of dangerous cargo, every practical step is taken to minimize risks to persons and adverse effects to the environment.

10.8.3 HSE Responsibility


10.8.3.1 Acts according to the checklists in 10.1O.

10.8.3.2 The worker at the operation informs about the danger of load and equips it with the necessary protective equipment.

10.8.3.3 Environmental safety is ensured.

10.8.3.4 Take necessary fire precautions and control system operation.


10.8.3.5 Controls the presence of the required warning and warning signs.

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10.9 Safe Handling of Dangerous Goods Operation Procedure Checklist


GENERAL

| S.NO | Eylem | SEÇ | OP. SOR | VAR. AMR. |
|--|--|-----|---------|-----------|
| ACCEPTANCE CARGO | | | | |
| 1. | A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility | X | X | |
| 2. | The MSDS form about load is provided. | | X | |
| 3 | The Certificate of Conformity for the ship carrying the dangerous cargoes will be checked. | | X | |
| 4. | Approved cargo handling / evacuation plan requested | | X | |
| 5. | The dangerous cargo (es) to be accepted to the port: 1. Risk arising from dangerous cargo 2. Interaction with dangerous cargoes existing at the port facility, 3. Interaction with cargoes planned to be accepted to the port facility in the near future, 4. Conditions for stowage 5. Conditions for segregation 6. Requirement of materials and equipment with respect to emergency response 7. Sufficiency of emergency response equipments 8. Interaction with the neighboring area (s) The issues mentioned herein above will be discussed within the scope of current IMDG CODE documents and a management decision for accepting/rejecting will be taken. | | X | |
| 6. | If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced. | | X | |
| 7. | Number of equipments and cranes, teams and shifts shall be specified. | | X | |
| 8. | The personnel who will work in the operation will be provided with information as regards the risks of the cargo and they will be equipped with the necessary protective outfit. | | X | |
| 9. | Required warnings, warning signs are provided around the area being handled. | | X | |
| P.S. : In standard handled loads, meeting is optional. Previous meeting resolutions may apply. | | | | |


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Procedures for safe handling of liquid bulk dangerous cargoes Checklist

| S.NO | Action | HSE | OP. RES. | SHIFT RES. |
|-----------------|--|-----|----------|------------|
| HANDLING | | | | |
| 1. | Unloading equipment and appropriate pipe selection are made by the person responsible with operations. International Safety Guide for Oil Tankers and Terminals (ISGOTT) Ship/Port Safety Control List is undersigned mutually. A communication network is built between the ship and the port facility. | X | X | X |
| 2. | Employees wait beside the flexible hoses which will be connected to the ship. They work in cooperation with the ship personnel for the connection of liquid cargo to entry/exit manifolds of the ship. | X | X | X |
| 3. | Appropriate pressure adjustment is made to the ship. Overflow of tankers is avoided and the ship personnel are provided with required information and the line is cut under dangerous situations | X | X | X |
| 4. | The vehicles coming to the loading or unloading platform at the port facility will be eliminated from static electricity, flame arrestor apparatus will be placed at their exhausts and their earthing shall be made during the loading or unloading at the port facility. Flame arrestor apparatus will be provided by the Ground Tanker Operations Unit. Ground tankers which don't have flame arrestors shall not be taken to the port facility. This will not be required for tankers having ADR standards. | X | X | X |
| 5. | It is checked that the communication equipment used in the operation area is exprof. | X | X | X |
| 6. | Flexible hoses used in loading or unloading of liquid bulk dangerous cargoes should have a certificate specifying the approval of type as well as pipe type, maximum working pressure of the pipe and production month and year of the pipe. | | X | X |
| 7. | Adequate number of electrical insulation flanges for the flexible hoses and loading arms used in loading or unloading operations of liquid bulk dangerous cargoes. | | X | X |
| 8. | The master of a ship and berth operator should before liquid bulk dangerous cargoes are pumped into or out of a ship from or into a shore installation agree in writing on the handling procedures including the maximum loading or unloading rates taking into account and undersigned mutually. 1. The arrangement, capacity and maximum allowable pressure of the ship's cargo lines and the shore pipelines; 2. The arrangement and capacity of the vapor venting system; 3. The possible pressures increase due to emergency shut-down procedures; 4. The possible accumulation of electrostatic charge; and 5. he presence of responsible persons during start up operations on board ship and ashore | | X | X |
| 9. | Agree in writing the action to be taken and the signals to be used in the event of an emergency during handling operations | | X | X |

| | | | | | |
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| S.NO | Action | HSE | OP. RES. | SHIFT RES. |
|--------------------------|---|------------|-----------------|-------------------|
| HANDLING | | | | |
| 10. | Effective communication between the ship and the shore installations is maintained throughout the handling operations | | X | X |
| Shift Supervisors | | | | |
| 1. | He will take adequate precautions are taken to prevent a short-circuit of the insulating section | | | |
| 2. | He will inspect and test the insulating and earthing systems at appropriate intervals to ensure their effectiveness | | | |
| 3. | He will ensure that any other metallic connections between the berth and the ship are protected or arranged so as to ensure that there is no possibility of incentive sparking where a flammable atmosphere may be present | | | |
| 4. | He will take actions in accordance with appropriate checklists in the International Safety Guide for Oil Tankers and Terminals (ISGOTT) | | | |
| 5. | He should ensure that the master of a ship is notified of any conditions which may require precautions to be taken for avoidance of sources of ignition on the ship such as galley stoves or cooking appliances with non-immersed elements. | | | |
| 6. | He should ensure that all drain holes and pipes and all other drains of any kind on the jetty, where liquid bulk dangerous cargoes might escape in case of an accident, are closed before handling commences and are kept closed during the whole of the period of the handling of liquid bulk dangerous cargoes. | | | |

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10.10 EmS (Emergency Procedures for Vessels carrying Dangerous Goods) and MFAG (Medical First Aid Guide)

In emergencies, it is important to use IMSBC, IBC or IGC Codes for bulk cargo as well as all available IMDG Code, EMS and MFAG information.


10.10.1 EmS

EmS contains procedures for the actions that can be taken if there is a fire or spill of dangerous goods.

It contains general procedures applicable to an entire substance class as well as procedures specific to certain products.

Examples of the information found in the specific "emergency schedules" are necessary protective equipment and the types of extinguishing agents that can be used to put out fires involving dangerous goods.

EmS is divided into EmS for fires and EmS for spills. There will be EmS numbers for every UN number in column 15 of the Dangerous Goods List. EmS number does not have to be specified in the Dangerous Goods Declaration.

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10.10.2 MFAG

MFAG table numbers do not have to be stated on the Dangerous Goods Declaration.

MFAG consists of a flow chart which shows what actions should be taken, based on the situation and symptoms, when a person has been exposed to dangerous goods of some kind. However, it is important that the person has been trained to use MFAG in advance so that it will work in an emergency.

The person can also get in touch with a doctor to get assistance treating an injured person.

Usage information below.

