

Minimum Safety and Operating Requirements. (M.S.O.R.) (ALLEGATO N° 4)

Elenco dei requisiti minimi costruttivi, operativi, di sicurezza e di prevenzione dell'inquinamento a cui le navi utilizzate da PE, o che approdano ai terminali PE o comunque di interesse aziendale, devono rispondere.

Lo scopo dei requisiti minimi è::

- adeguare gli standard operativi e costruttivi delle navi alle restrizioni normative in materia di sicurezza e di tutela della salute vigenti nei terminali aziendali o di interesse aziendale.
- ridurre, per quanto possibile, il gap tra i diversi standard di sicurezza a cui le navi sono chiamate a rispondere, in funzione dell'anno di costruzione delle stesse. Le navi più vecchie rispondono a standards di sicurezza inferiori poiché, in linea di principio, le nuove norme successivamente prodotte dall'IMO non godono del carattere di retroattività, se non in casi particolari e non devono quindi essere applicate alle navi esistenti (Grandfather clause).
- assicurare l'accesso ai terminali aziendali o di interesse aziendale solo alle navi che operano in conformità a criteri di sicurezza e di prevenzione dell'inquinamento riconosciuti ed accettati e come definiti nelle " *Industry Guides* " .

Procedura N° 13 – Ediz. 1 ALLEGATO 4

POLIMERI EUROPA

Minimum Safety and Operating Requirements (MSOR)

POLICY

It is POLIMERI EUROPA POLICY to perform any of the activities correlated with the operation of ships and the sea transportation of dangerous products in a SAFE and ENVIRONMENTALLY RESPONSIBLE manner.

APPLICABILITY

The terms “ vessel ” or “ ship ” used throughout this document refer to all seagoing vessels involved in the carriage of liquid dangerous cargoes in bulk.

“Dangerous cargoes” are those petroleum products with any flash point listed in the Marpol Convention 73/78 Annex I as amended, noxious and chemical liquid substances listed in Appendix II and III of Marpol Convention 73/78 Annex II, as amended and liquefied gases among those listed in the Chapter XIX of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk.

VESSELS APPRAISAL AND ACCEPTABILITY PROCESS

Vessels proposed for employment or calling at PE terminals are screened each and every time on the bases of the most recent information available.

In the evaluation process, extensive use is done of the information and reports available in the industry and Administrations database. Direct investigations and inspections are carried out as well, to the extent deemed necessary.

As an indication, the following is a non exhaustive list of the information sources used in the ship’s evaluation process, for owners and operators to familiarize themselves with PE Vetting procedure:

CDI/SIRE Inspection Reports, Lloyds Maritime Information Services, PSIX (US Ship information Exchange), Equasis – Sirenac database, own Terminal Operators Feedback

In addition to the positive response produced by the above listed information sources, the “consideration for acceptability” of the vessel is based on her compliance to the Minimum Safety and Operating Requirements (MSOR) described herewith.

Operators ability to perform and maintain a credible ship management standard and to comply with the requirements described throughout this document will be verified as a part of a systematic monitoring process.

Third party audits and independent auditors may be used to ascertain such a capabilities.

DISCLAIMER

Compliance with all Safety and Operational Requirements does not assure that a vessel will be accepted, as additional factors (vessel and operator history, commercial, insurance, etc.) are also taken into consideration when determining the ship acceptability.

Compliance of a vessel with the Minimum Safety Requirements defined herein does not pose any obligation on POLIMERIEUROPA to employ or to accept that particular vessel nor give to the owner or operator any right or privilege of any kind.

No responsibility is accepted by PE for any consequences whatsoever resulting directly or indirectly from compliance with or adoption of the recommendations contained herein. PE shall not be under liability whatsoever to any ship-owner, operator, cargo trader or supplier for damages arising out or by reason of non-approval of a vessel.

STANDARDS

Vessels tendered to PE must comply with all applicable International Convention and Regulation, Flag State, Classification Society, Port State and local requirements and the additional MSOR outlined herewith.

Vessels must be operated in accordance with the provisions contained in the latest edition of ICS/OCIMF/SIGGTO “International Safety Guide for Oil Tankers and Terminals”, “Tanker Safety Guide for Liquefied Gases”, “Tanker Safety Guide for Chemicals”, whichever is applicable and with the other recognized industry publications and guidelines.

AGE REQUIREMENTS

POLIMERI EUROPA is strongly committed not to employ or accept at its own terminals vessels older than 25 years.

The date of reference for this age requirement is the year of delivery of the vessel or the date of “Major Conversion” where Major Conversion takes the meaning given in the Marpol 73/78 Annex I Reg. 1(8) in so far that the converted vessel has been treated as a vessel built after 1 July 1986 for the application of :

- *Solas Convention 74/78 as amended in 1983 and,*
- *IBC Code for chemical carriers or*
- *IGC Code for gas carriers or*
- *IMO Resolution MEPC. 52(32), Amendments to Annex I of Marpol 73/78 for oil carriers built (building contract signed) on or after 6 July 1993.*

Oil and chemical carriers passing their Fifth Intermediate Class Survey are requested to

Condition Assessment Program (CAP).

For a vessel to be considered for employment or acceptance at PE terminals the CAP Certificate or Declaration shall indicate a rating of 1 or 2 for the Hull.

Relaxation to the above age requirement may be taken into consideration for gas tankers and their employment or acceptance be extended beyond their twenty-fifth year of age AND up to the twenty-eight year of age provided that the vessel is entered in a Condition Assessment Survey Scheme (CAP) on or before their Fifth Class Renewal Survey, and the CAP Certificate or Declaration is indicating a rating of 1 or 2 for the condition of the hull.

SAFETY MANAGEMENT SYSTEM

Shipboard Management System as far as Safety and Prevention of pollution are concerned must comply as a minimum with the standards defined in the IMO ISM Code.

Shipboard Safety Management System documentation (Ship Operation Manual, Company instructions, Safety Manuals, Bridge Organization Manual, Cargo Handling Manual, Machinery Operation Instructions, Equipment Maintenance Procedures, Training and Emergency Manual, Reporting Forms, records of drills and test, and everything required) should confirm a satisfactory implementation of a reliable Safety Management System.

Ship-specific Technical Manuals should be available on board, detailing how to use, maintain and operate the ships and its equipment. Essential operating instructions and warnings should be repeated as labels or charts to be located on, or in the immediate vicinity of, the operating stand.

The File of Enhanced Survey Program should be properly maintained on board in a standard format as per IMO RES. A.744(18).

Emergency Procedures must be available on board covering, as a minimum, steps to be taken in the event of pollution, collision, fire, grounding, explosion, flooding, toxic cargo spill and vapour emission.

An adequate recording of onboard events must be maintained in appropriate Deck and Engine Log Books. Events registration should be such to consent the reconstruction of on board activities either at sea and alongside.

BRIDGE MANAGEMENT

Bridge Management and Organization shall reflect, as a minimum, the standards defined in the STCW Convention and in the recognized industry recommendations and publication..

Clear evidence must be provided on how watches are organized for the different sailing and maneuvering scenarios at sea and in port. Company Instructions must be available for the planning and executions of the voyage, the updating of charts and publications, the recording of data and events, the execution of the prescribed tests and maintenance of

MANNING

Vessels must be adequately manned for the intended trade so that a safe continuous watch or watches appropriate to the prevailing circumstances and conditions are maintained on board at all times.

The required Minimum Hours of rest for the watch-keeping personnel must be monitored to assure that the efficiency of all watch-keepers is not impaired by fatigue or workload.

For all vessels, in addition to compliance with their Safe Manning Certificate, the Minimum manning level shall be not less than:

Deck: Master plus 2 deck officers

Engine: Ch. Eng. Plus 2 engineers

Different manning arrangement may be considered/required for vessel operated on short haul coastal trade and for the engine department based on the level of the engine room automation level.

Watch-keeping personnel to be in possession of the required STCW Convention certifications and endorsements for dangerous cargoes according to the type of trade the vessel is involved.

NAVIGATING EQUIPMENTS

Vessels must be provided at least with the following navigation equipment: two radar, a course recorder, two GPS, a depth finder with recording capabilities, one gyrocompass, magnetic compass off-course alarm.

For vessels above of 5000 GRT one of the radar must be provided with ARPA capability with speed input obtained from the ship's automatic speed log.

The above bridge equipment must be maintained in a good operational status at all times.

SHIP SURVIVAL CAPABILITY

Chemical Ships and Gas Ships should comply with the survival requirements defined in the IBC and IGC CODES respectively, regardless of the year of built of the vessels.

The condition of stable equilibrium during the flooding and the final condition after the flooding should satisfy the requirements defined in the above respective International Codes of Construction.

SHIP STABILITY

Vessels should have positive inherent stability capabilities to consent the concurrent transfer operation of cargo and ballast when alongside, taking into account the negative effect on stability produced by the maximum hypothetical free surface produced when all floodable compartments are slacked.

The initial metacentric height corrected for free surfaces in any condition of cargo and ballast and calculated at 0° heel should be not less than 0.15 m. The area under the righting lever curve should not be less than the value indicated at point 3.1.2.1 of the Intact Stability Code (IMO Res. A 749 (18)). If operational restrictions or critical conditions are envisaged for the vessel to comply with the above requirements, a notice should be given to PE Vetting Service. Any such restrictions shall be evaluated on a case by case basis.

Vessels with length in excess of 120 meters must be provided with a loading computer for the calculation of stress and stability. The software used must be approved by the

Classification Society and its operating instruction should provide information for the calibration checks of the software.

For Chemical and gas carriers the loading computer is requested when the length of the ship exceeds 65 meters.

CARGO TANK VENTING SYSTEM

The venting system of ships carrying oil must comply at least with the requirements of Solas 74/78 as amended, Chapter II-2, Reg 59 and 62 regardless the year of built of the vessel.

*Each cargo tanks must be provided with “ **independent** ” P/V or H/V valves to take into account the effects of temperature variations (breathing system) and “ **independent or common** ” venting arrangements designed and operated as to ensure the passage of large volumes of vapour mixtures during loading, discharging or ballast handling. The two functions can be combined in one single system, as in the case of independent high velocity valves.*

Both the tanks breathing system and the venting of large volumes of vapours are to be backed up by an alternate system capable of assuring the completeness of the functions (breathing and venting of large volume of vapour) in case of a failure of the primary system.

The provision of providing a pressure sensor with a monitoring and alarm system for all cargo tanks can be accepted as an alternative to the duplications of the system only in the case the vessel is fitted with a centralized cargo control room from where the whole of the cargo operations can be monitored and an alarm for high or low pressure can immediately be picked up and the interested tank identified.

In chemical carriers venting during loading and discharging operations of those product requiring a “ controlled venting system” has to be carried out through automatic devices (P/V or High Velocity valves) capable of

- *Maintaining an adequate vapor pressure in the tank (or vacuum during discharging for non-inerted tanks).*
- *Assuring that the tank design maximum pressure and vacuum are never exceeded .*

P/V and H/V valves must be bench tested for maximum pressure and vacuum setting and venting capacity at least every 60 months and a certificate issued by the classification society.

Information must be available and posted in the cargo control room to confirm cargo tanks venting capabilities and maximum admissible cargo loading rate for each tank.

INERT GAS SYSTEM

*Vessels carrying flammable petroleum products are to be fitted with an inert gas system in compliance with Solas Cap. II-2 Reg 62, as amended, (or equivalent) **regardless the year of built of the vessels**, and shall operate at all time with inerted tanks whenever:*

- *The DWT of the vessel is grater than 20,000 Tons, or*
- *The capacity of any tank used for the carriage of the cargo exceed 3,000 cubic meters, or*

- *The individual nozzle capacity of a tank washing machines exceed 17.5 cubm/hour or the total combined throughput from the number of machines in use in a cargo tank at any one time exceed 110 cubm/hour.*

Notwithstanding the above, PE is strongly committed to operate with inerted cargo tanks whenever the flash point of the oil products is below 60° C, **regardless the size of the ship.**

Furthermore, vessels involved in the carriage of Acrylonitrile are required to be fitted with a nitrogen generating plant and to operate at all time with inerted tanks.

CLOSED LOADING SYSTEM

Vessels which are loading or discharging a volatile, flammable, toxic or noxious cargo must operate at all times in the Closed Operation Mode.

Closed operations refer to the procedures whereby tankships conduct cargo transfer and ballast operations into cargo tanks, with tank apertures closed and with vapour being emitted only by means of a dedicated venting system which is designated to disperse the vapour clear of working areas and possible ignition sources or to convey it to the shore vapour collecting system.

The operations related to cargo tanks ullage measurements, sampling, water and temperature detection and dipping must be carried out under closed system, through the fittings described herewith.

At least one dipping points fitted with vapour lock must be available in the aft part of each cargo tank.

Whereas the terminal requirement is for the cargo vapour to be routed back to shore, the ship's venting system must be approved by the Classification Society as meeting the requirements of the IMO MSC Res. 585.

To the extent of the application of this requirement, fuel oils, heavy fuels and similar cargoes are to be regarded as noxious cargoes.

CLOSED OPERATION

*Vessels carrying volatile, flammable, toxic or noxious cargoes must be provided with **fixed closed** ullage gauges in all cargo tanks with local or remote indication.*

In addition, in oil and chemical carriers, vapour locks must be fitted on each cargo tank to consent sampling, dipping, water and temperature detection without need of opening the cargo tanks. The use of portable hermetic tapes as primary gauging system is not accepted. The following fixed closed ullaging devices are deemed acceptable: mechanically operated floating gauges, electrical capacitance gauges or electronic probes, ultrasonic and sonic methods.

In case of break down of a fixed gauge, ullage operations should temporarily be performed by means of portable hermetic tapes through the vapour locks, provided that correction factors are available and certified so that ship's original calibration table may be used. Correction factors should take into account the difference in height with respect to the original datum and differences due to the trim and list of the ship. The number of portable hermetic tapes available on board must be in accordance with the provisions of IMO MSC/Circ. 551, taking into account the foregoing.

OVERFLOW CONTROL SYSTEM and HIGH LEVEL ALARM

Oil, Chemical and Gas Ships must be provided with an OVERFLOW CONTROL SYSTEM in all cargo and slop tanks, independent from the fixed ullage gauges. In Gas Tankers the operation of the O.C.S. must activate the alarm, stop all cargo pumps and compressors and close the tank filling valves.

The alarm (O.C.S.) in all ships must be of audible and visual type with alarm indication in CCR or on main deck in case of ships without cargo control room. In this latter case the position where the O.C.S. panel is located should be continuously manned during the cargo transfer operation so that the alarmed tank can be immediately identified.

For chemical carrier carrying products requiring an IMO 2 type ship, the intended tanks must be fitted with an independent high level alarm (in addition to the above mentioned O.C.S.).

FILLING LIMITS

No cargo tanks should be loaded above 98% volume or above the Overflow Control System sensor level.

PREVENTION OF POLLUTION

Vessels are to be provided with Segregated Ballast Tanks.

Segregated ballast, as defined in Marpol 73/78 Annex I, Reg. 1(17), should be in such a quantity to consent the safe navigation and the ship maneuverability without the need of introducing extra ballast in the cargo tanks (with the exception of the heavy-weather ballast). The segregated ballast condition should be authorized and approved in the ship's Loading and Stability manual as meeting the requirements for the safe navigating condition in port and at sea.

All vessels must have deck peripheral fishplate enclosing the main deck area from bow to stern and including a transverse coaming positioned aft of the last cargo tank.

The coaming must be at least 100 mm high except in the aft corners where it should progressively rise to 250 mm.

CARGO PUMP-ROOMS

Vessels fitted with cargo pump-room located below the main deck will not be taken into consideration for the carriage of Marpol Annex II toxic cargoes.

Cargo pump rooms should be fitted (strongly preferred item) with a fixed gas monitoring system capable of continuously monitoring the compartment for presence of flammable gases.

Furthermore, the compartment shall be provided with fixed bilge draining arrangement operable from outside the compartment, bilge high level alarms and adequate ventilation systems with capabilities of air extraction from the lower part of the compartment.

To the extent of the application of the above requirements, pipe tunnels are to be regarded as cargo pump rooms.

Cargo pumps in pump room must be fitted with bearing and casing remote high temperature alarm.

FIRE FIGHTING SYSTEM

Chemical and oil carriers provided with a fixed deck foam system capable of delivering the foam to the entire cargo deck area as well as into any cargo tank are preferred. The

the accommodation spaces and readily accessible and operable in the event of fires in the areas protected.

CO₂ and steam smothering system for the protection of the cargo tanks are not deemed acceptable.

The effectiveness of the foam fire-extinguishing system in chemical carriers should as a minimum meet the requirements of the BCH Code for vessels built (building contract placed) after 20 May 1980.

STRUCTURAL SURVEY

Oil and chemical carriers are to be surveyed according to IMO ESP Requirements, regardless of the size of the ship.

The Condition Evaluation Report should not highlight any meaningful structural outstanding item or, for tanks carrying chemical products, areas of degraded coating condition.

Copy of the Condition Evaluation Report should be provided on request.

For all vessels, no area of substantial corrosion, structural defects or cracks should be reported in the Hull Class Survey Report..

USE OF FLEXIBLE HOSES

Flexible hoses should not be used on board of the vessel when alongside PE terminals, unless previously agreed with PE vetting service.

STEERING GEAR

Steering gears must be of fully duplicated system with possibility of starting the standby power unit from the navigating bridge, regardless of the size and the year of built of the ship.

Alarm in case of power failure of the steering unit under service or in case of low liquid level in steering gear service tank must be given in the navigating bridge.

GENERATING SETS

Where only one generating set is normally to be in operation, there should be the provisions for automatic starting and connection to the main switchboard of a standby generator of sufficient capacity to permit propulsion and steering and ensure the safety of the ship in case of loss of the generating set in operation. Where more than one generating set is normally to be in parallel operation, there should be provisions (by load shedding for instance) to ensure that, in case of loss of one of these generating sets, the remaining one(s) are kept in operation without overload to permit propulsion and steering and ensure the safety of ship. For non-automated vessels, the operational requirements of keeping two generators running in parallel operation while navigating in restricted water, may be considered as satisfying this requirement, provided that each of the generators is able to support the full electrical load during maneuvering and in port transit. A declaration to this effect should be obtained by the Classification Society. Such declaration is to be re-endorsed at each annual machinery survey.

LIFTING APPLIANCES.

Vessel should be provided with midship lifting appliances as follows:

from *5* *to* *16 KTDWT*
from 16 KTDWT upwards

5 tons SWL
As per OCIMF Recommendations for oil
tanker manifolds and Associated
Equipment (Ed..1991)

DRUGS AND ALCOHOL POLICY

A drug and alcohol abuse policy must be established and effectively implemented on board, meeting at least the standards defined in “ OCIMF GUIDELINES FOR THE CONTROL OF DRUGS AND ALCOHOL ON BOARD SHIP” June 95.