

WARTIME INSTRUCTIONS
FOR
UNITED STATES
MERCHANT VESSELS



United States Fleet
Headquarters of the Commander in Chief
1942

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1. WARTIME INSTRUCTIONS FOR UNITED STATES MERCHANT VESSELS is issued for the information and guidance of all concerned. It is effective upon receipt.

2. This publication supersedes INSTRUCTIONS FOR NAVAL TRANSPORTATION AND U. S. MERCHANT VESSELS IN TIME OF WAR, PART I, 1940, all copies of which shall be destroyed. No reports of destruction are required.

R. S. EDWARDS,
Vice Admiral, U. S. Navy,
Chief of Staff.

(II)

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Chapter I. GENERAL

Section 1. CONFIDENTIAL PUBLICATIONS

1101. All merchant vessels of the United States are required to have on board an allowance of certain publications in order that they may have necessary information for communicating with each other and with shore stations, and be able to cruise together efficiently. These publications can be obtained by masters from the nearest Navy issuing office, usually located in the naval district headquarters. It is essential that masters have these publications on board before sailing and they must present proper credentials to the issuing office to obtain them. At the end of each voyage, on arrival in a United States port, masters must call at the Navy issuing office to check their publications for latest corrections and to obtain any new publications that may have been issued in their absence.

1102. (a) When a master, who has in his possession confidential publications, is relieved from command, he must turn over to his relief all such publications, in the presence of the commandant of the naval district, or his representative, if in a home port.

(b) In case the master is relieved of his command in a foreign port, he must turn over the confidential publications to his relief, in the presence of a United States naval officer or the American consul.

(c) In home ports, when it is not possible to turn over the publications as set forth in (a) above, the master must turn them over to the senior officer on board, who in turn will deliver them to the new master. The officer receiving the publications from the old master, and the new master when receiving them, will have transfer re-

ceipts witnessed or endorsed by the owner of the ship or his representative and shall forward these receipts to the Vice Chief of Naval Operations, Navy Department, Washington, D. C.

(d) In a foreign port, where it is not possible to carry out the procedure outlined in (b) above, the publications must be turned over to the new master, whose receipt for same, witnessed or endorsed by the owner of the ship or his representative, shall be forwarded at once to the Vice Chief of Naval Operations, Navy Department, Washington, D. C.

1103. (a) The loss or destruction of any confidential publication must be reported immediately to the Vice Chief of Naval Operations.

(b) In the event of the vessel being sunk or molested by the enemy, a notification as to the disposal of all confidential publications must be inserted in the depositions of the master.

(c) *Confidential publications or documents must never be allowed to fall into the hands of the enemy.*
(See sec. 11.)

Section 2. FITTING OUT OR LOADING

1201. The following instructions are to be observed while a vessel is fitting out or loading:

(a) Maintain continuous watch to prevent the approach of any unauthorized vessel or boat, or the approach of unauthorized persons by way of the dock.

(b) Maintain continuous watch to prevent unauthorized persons approaching the caisson when vessel is in drydock.

(c) Have the entire ship inspected frequently at irregular intervals by competent persons. Inspection to include magazines, cargo spaces, store rooms, engine rooms, fire rooms, steering engine room, etc.

(d) A watch should be kept day and night to insure that no unauthorized person comes aboard.

(e) All compartments in which workmen are engaged should be kept under constant surveillance.

(f) Thorough examination should be made of all compartments immediately upon the departure of workmen each day, at noon and upon completion of work.

(g) Watch should be maintained on all coal or oil barges alongside. Coal shoveled into buckets or taken up by elevator should be inspected for any foreign matter.

(h) Fire hose should be kept connected up at all times. Pressure on each riser should be tested at sundown each day. When water from shore is used, the pressure on each shore line should be similarly tested.

(i) Crews should be exercised frequently, day and night, at fire quarters.

(j) Extreme care should be exercised when loading cargo and close supervision exercised over stevedores.

(k) Masters should refuse to accept any consignment of cargo which appears in any way suspicious. In such cases they are to insist upon a full examination of the contents of the packages. If in a foreign port, the matter must be brought immediately to the attention of the naval authorities, if the vessel is commissioned in the Navy, and to the attention of the agent or American consul, if the vessel is not commissioned in the Navy.

(l) If it is necessary to purchase stores in a neutral port, they must be obtained from a United States firm, or if this is impossible the American consul must be asked to recommend a reliable neutral firm.

Section 3. NEUTRAL CREWS FOR MERCHANT VESSELS

1301. (a) Neutrals are *not* to be signed on in any foreign country unless absolutely necessary, and then only in the presence of a United States consular officer.

(b) If it becomes absolutely necessary to take on neutrals in a foreign port, either to complete the complement or for temporary work, such as tallying cargo; they must be kept under close supervision while the ship is in harbor and are not to be trusted with responsible duties, such as quartermaster, helmsman, or night watchman.

(c) All precautions prescribed in paragraph 1201 above should rigidly be adhered to.

Section 4. NEUTRAL PORTS

1401. (a) While in neutral ports, the safety of the ship must be the care of her officers and must not be turned over to the night watchman.

(b) If the vessel should happen to be berthed alongside or close to an enemy ship, the matter must be brought at once to the attention of the American consul, with a view of having the vessel shifted to another berth.

Section 5. STATIONING SHIP'S COMPANY

1501. Before sailing, the Master must arrange with the commander of the armed guard for the stationing of the ship's company so as to provide for the following:

(a) An efficient lookout service underway. (See ch. II, sec. 3.)

(b) Manning the guns.

(c) Control of damage.

(d) Communications, including messenger service.

(e) Abandoning ship.

Section 6. LIFEBOAT AND LIFERAFT EQUIPMENT AND STOWAGE—LIFE JACKETS

1601. All lifeboats and liferafts shall be furnished as provided in the Code of Federal Regulations, Title 46, subchapter 0, Part 153 and in accordance with *Merchant Marine Wartime Emergency Safety Regulations*.

1602. At each boat embarking station there shall be kept additional life jackets for use by men whose boats may become seriously damaged in launching.

1603. While in a danger zone, lifeboats attached to davits should be carried, if possible, in the outboard position, gripped to spars or otherwise secured in such manner as to be ready for instant lowering. Lifeboats not attached to davits should be placed in position under davits, ready for hooking on. Liferafts shall be so stowed in various parts of the ship that they may be easily launched. They should be so secured that they will float free if the ship sinks.

1604. *Each member of the crew, passengers, and troops will be furnished with a life jacket which he must keep in his bunk until a danger zone is entered, when he will carry or wear it while awake and keep it near him while asleep.* Each life jacket shall have stitched to it a short length of 21-thread manila line at one end of which there shall be spliced a 4-inch galvanized snap hook, so that the wearer may secure the line around himself and fasten the hook to a liferaft or lifeline. Each jacket should also have secured to it a whistle and a watertight flashlight.

1605. Passengers and crew should be enjoined to keep themselves warmly clothed and to be ready at all times for an emergency when the vessel is in a danger zone wherein enemy attacks are probable. They should be instructed to retain their clothing even when im-

mersed in water clinging to a raft or wreckage, as their endurance in cold water will be greater with clothing even if it is constantly submerged.

Section 7. WATERTIGHT INTEGRITY AND STABILITY

1701. To increase the safety of the vessel in case of damage by mine or torpedo, it is necessary to take all preliminary steps practicable to reduce the amount of water entering the vessel, to avoid unsymmetrical flooding of compartments, and to avoid the entrance of water through openings in the ship's side if the vessel takes a considerable list or the draft is materially increased due to such damage. To limit the amount of water introduced into the vessel, careful attention must be given the watertightness of the main transverse bulkheads.

1702. All doors, manholes, or other openings, whether watertight or not, throughout the vessel should be closed and dogged down. They should be opened only when ships business requires and should be closed immediately thereafter. Shaft alley doors are not to be left open except when one of the engine room crew is in the shaft alley.

1703. Careful attention should be paid to maintaining the freeboard of the vessel to the highest point practicable by keeping closed while in a danger zone all openings through which water may enter the vessel, such as air ports, cargo ports, and scuppers leading to decks below the weather deck, so as to prevent the entrance of additional water in case the vessel takes a large heel or is submerged below the usual water line. Such openings should be closed as a preliminary precaution, as it is practically impossible to carry out this work after the damage is received. The closing of such openings may result in saving the vessel or, if the vessel

is finally lost, it may so retard her sinking as to give an opportunity for the saving of personnel on board.

1704. (a) As far as is practicable, side scuttles and other openings in ship's sides below the uppermost continuous deck and in the first tier of erections above that deck should be kept closed while the vessel is in a danger zone. Sanitary discharges and scuppers below the lowest continuous watertight deck and less than 15 feet above water, unless equipped with appliances which under pressure will be watertight, should be closed, as should be all other sanitary discharges the use of which is not indispensable.

(b) Collision mats should be carried ready for rigging should the need arise. In case of necessity mattresses and even certain types of cargo can be used to advantage in plugging holes.

(c) Bilge-pumping installations should be maintained at all times in an efficient condition. Before the commencement of each voyage, bilges and strum boxes in holds and machinery compartments should be cleaned and defects in the system should be corrected.

1705. (a) Before proceeding to sea, the master, chief officer, chief engineer and the officer commanding the Armed Guard should make a thorough inspection of the ship to see that all watertight doors, fire hoses, davits, and safety and emergency equipment are in good working order.

(b) Entry is to be made in the log and is to be signed by the master and officer responsible for watertight doors and hatches, to the effect that doors and hatches have been tested and are in good working order.

Section 8. DEFENSIVE ARMAMENT

1801. The right of a merchant crew to forcibly resist visit and search and to fight in self-defense is well recog-

nized in international law; therefore, armament will be supplied for the purpose of preventing and resisting an attack by an armed vessel of the enemy.

1802. An armed merchant vessel must not under any circumstances interfere with or obstruct the free passage of other merchant vessels or fishing craft, whether these are friendly, neutral, or hostile.

1803. Participation in armed resistance must be confined to persons acting under the orders of the master or officer in command of the Armed Guard. Passengers who are not members of the naval or military services should not participate in an actual engagement with the enemy, but there is no objection to such persons acting as lookouts.

1804. Before opening fire, the United States colors must be hoisted.

Note.—Although the flag is no guide to the nationality of a submarine or armed enemy vessel, there is nothing in international law that justifies a merchant vessel in opening fire on a suspicious but unidentified vessel. On the other hand, merchant vessels are specifically prohibited from taking offensive action against any vessel unless first attacked, or unless it may be reasonably presumed that the vessel is maneuvering to attack. It should be considered a reasonable presumption that a submarine is maneuvering to attack if the periscope of a submerged submarine is seen or if a submarine on the surface approaches within torpedo range of the vessel.

1805. Vessels entering zones where they may be subjected to attack by aircraft should cover with sandbags the top of the wheel house and radio house, and the engine room and fire room skylights.

Section 9. ARMED GUARD

1901. The following instructions relative to gun crews shall be carried out by all armed merchant vessels.

(1) One man of each gun crew shall at all times be on watch at the gun.

(2) While in a danger zone, the gun crews shall be, at all times, in the immediate vicinity of their guns; meals shall be served to them at their guns; one forward and one after gun shall be kept loaded and manned continuously, day and night.

(3) Comfortable, well-sheltered accommodations for the gun crews, in the immediate vicinity of their guns, shall be provided.

(4) Daily pointing, loading, and fire control drills shall be held.

1902. When an Armed Guard is placed aboard a merchant vessel, the following instructions shall be strictly followed. A naval liaison group will be governed by the same instructions.

(a) The armed guard is commanded by a naval officer or petty officer detailed for that duty. He shall have exclusive control over the military functions of the Armed Guard and shall be responsible for the execution of all the regulations under which it functions.

(b) The Armed Guard shall be subjected to the orders of the master of the merchant vessel as to matters pertaining to internal organization, but the members of the Armed Guard shall not be required to perform any ship duties except their military duty, and this shall be performed invariably under the direction of the commander of the Armed Guard.

(c) The military discipline of the Armed Guard shall be administered by the commander of the Armed Guard.

(d) The decision as to the range for opening or ceasing fire shall reside exclusively with the commander of the Armed Guard.

(e) The enlisted personnel of the Armed Guard shall be quartered and messed together on board, both in port and at sea, in a manner satisfactory to the commander of the Armed Guard. The subsistence furnished to enlisted men on a commercial vessel is paid to the owners by any disbursing officer upon receipt of substantiating data.

(f) The commander of the Armed Guard attached to a merchant vessel is the master's military adviser and represents the Navy Department. In accordance with law, the master commands the vessel and is charged with her safe navigation and the safety of all persons on board. A commissioned officer, as the commander of the Armed Guard, is expected to be quartered and messed on board, both at sea and in port, in a manner appropriate to a ship's officer. He will reimburse the owners direct for subsistence.

(g) The master of the merchant ship shall, on request of the commander of the Armed Guard, detail members of the crew to handle ammunition, clear decks, and otherwise supplement the service of the guns.

(h) The commander of the Armed Guard shall be responsible for:

(1) The condition of the battery and its appurtenances.

(2) The training of the gun crews and spotters, including members of the ship's force detailed by the master to assist in the service of the gun.

(3) The readiness of the battery at all times.

(4) The readiness of the Armed Guard to perform its duty at all times.

(5) The continuous lookout near each gun by a member of the Armed Guard.

(6) Providing in advance of attack for the necessary cooperation by the master in maneuvering the ship to permit keeping the enemy under fire.

(7) The making of all required reports to the Navy Department.

(i) Spotting will be done by the commander of the Armed Guard. The master will, however, detail an officer as his understudy and make him available for daily instruction and exercise, to the end that if the commander of the Armed Guard is disabled, his place may be immediately filled.

1903. When the vessel does not have a Navy communications officer aboard, master and Armed Guard commander should have a complete understanding regarding their joint responsibility for communications. All publications received by the master, unless specifically stated otherwise, shall be available to the Armed Guard commander. Encoding and decoding are the joint responsibility of both officers.

1904. Master and Armed Guard commander should have a settled plan of action to meet all emergencies. The merchant officer on watch on the bridge should be given instructions accordingly. In formulating these plans, the following should be borne in mind: (1) Weather conditions likely to be encountered; (2) the areas and times in which enemy attacks may be expected; and (3) the types of enemy forces likely to be employed. Particular caution should be exercised during morning and evening twilight.

1905. The master of the vessel shall keep the commander of the Armed Guard, if he is a commissioned,

warrant, or chief petty officer, informed at all times concerning:

- (1) The ship's position.
- (2) The course.
- (3) Location of mine fields of which the master has knowledge.
- (4) All war warnings received.
- (5) Confidential instructions received from naval authorities as to measures tending to the safety of the ship.

The known assistance that may be expected from Allied ships and airplanes should be kept in mind at all times. The proximity of a course to the nearest port in which a vessel may take refuge until enemy threat has passed, or to which boats may proceed in case vessel is sunk, should be daily determined and responsible personnel informed.

1906. When vessels to which a commissioned, warrant, or chief petty officer is assigned as commander of the Armed Guard are to sail in convoy, the commander of the Armed Guard shall attend the convoy conference with the master of the vessel to which he is assigned. If his vessel is to sail singly, the commander of the Armed Guard, if a commissioned, warrant, or chief petty officer, shall obtain routing and similar information from the port director or routing officer at the port of departure. This is in addition to the information of a similar nature which is furnished the master.

Section 10. POSITION OR FOG BUOYS

11001. Masters of all vessels while fitting out, or before joining convoy, will have constructed for each ship at least two position or fog buoys. For details of construction see Mersigs., Vol. I, Article 56. and accom-

panying diagram. In addition they will equip their vessels with a reel and line of sufficient length to tow the buoy at the correct position astern. The line will be marked so that the buoy, when towing, will be at a distance from the foremast of the towing ship equal to the "distance" between ships prescribed by the convoy commander. Fog buoys shall not be streamed in clear weather as their tracks resemble those made by periscopes.

Section 11. PRECAUTIONS AGAINST LEAKAGE OF INFORMATION

11101. (a) Masters of ships, especially those which are defensively armed, are warned that, in the event of their ships being attacked by enemy vessels, every care is to be taken to prevent any particulars of the incident getting into the press on their arrival in port. In any circumstances, neither the name of the ship, nor of the master, nor of any of the crew, nor the steps taken to repel or avoid attack, are to be made public.

(b) It is recognized that there will be some difficulty in complying with this, especially in neutral countries, but the importance of silence is to be impressed on all, as the future safety of the ship may depend on it.

(c) No information on the subject is to be given to anyone except United States or allied naval authorities or United States consular or United States customs officers.

(d) The Navy Department will decide as to what information should appear in the United States press.

11102. Many schemes will be adopted by the enemy to obtain intelligence of the proposed sailing date and probable route of United States ships. Among these may be mentioned bogus telegrams and telephone messages, which would almost certainly be used by enemy

agents to gather information, and masters must be on their guard against such devices.

11103. Masters should arrange with their owners and agents for the use of a code group in lieu of their names. A master telegraphing from a neutral port to his owners or agents is to adopt the system of using this code group instead of the name of the ship. When absolutely necessary to mention the name of the ship, it must not be put on a telegram that gives dates of sailing or arrival.

11104. Care must be taken that any documents which must be deposited with local authorities do not contain any information as regards course, speed, or position, or any other subject which might prove useful should it fall into the hands of the enemy.

11105. Entries in the ship's log are not to contain any confidential information. Particular care must be taken in cases where the vessel has been directed to follow a special course; in these cases all the records must be destroyed by fire by the master personally.

11106. All confidential books and papers are to be kept in a special canvas bag fitted with eyelet holes around the middle to insure rapid sinking, suitably weighted, and with a lacing for securing the mouth. Confidential books and papers must never be removed from the bag without the master's permission and then only for reference, and must be returned as soon as finished with. In harbor the bag is to be kept locked up in the ship's safe or if no safe is available in the master's cabin then the master is to retain the key in his own possession. At sea the bag is to be kept locked up on the bridge; the master (and also the chief officer) should be provided with a key.

11107. (a) The master must make preparations in advance for disposing of all confidential books and papers promptly in an emergency to prevent their falling into the hands of the enemy. (See sec. 1.)

(b) It must be realized that to tear a paper into pieces, however small, is not the proper method of destroying it. It must be burned to insure complete destruction.

(c) If the vessel is attacked and there is possibility of her being captured, all confidential books and papers must be destroyed at once. Weighted books and papers shall be thrown overboard.

(d) The master is to instruct his officers that in the event of any one of them becoming the senior officer in the circumstances mentioned above, he is to perform this duty in good time.

11108. No entry will be made in the log, nor in any other of the ship's papers, nor in private papers or diaries, of ships sighted at sea or in company in port. Ship's officers crew or passengers must not discuss the movements of such ships, or their speed, armament, nature of cargo, or other characteristics, as enemy agents may be encountered anywhere.

11109. The course and position must be regarded as confidential, and are not to be made known to other than those who are involved in the handling of the ship or reporting emergencies by radio, commanding officer of naval guard unit or other recognized naval authorities excepted. Any records made thereof, except as entered in the secret log, shall be burned when no longer needed, but in any event prior to arrival at a port of call.

(a) The radio operator should be given a written list of expected positions of the ship for each 2 hours while in dangerous waters, which list shall be burned immediately upon the issuance of a new list.

(b) Such courses and positions as may be drawn on the chart should be ruled faintly and rubbed out completely as soon as no longer required. Attention is

invited to the hazard of leaving charts pricked with divider points, even though the penciled tracks and fixes may have been erased.

(c) A deck log and engine log may be kept but shall not contain, under any circumstances, any record of, or information relative to, the following particulars:

- (1) Latitude and longitude.
- (2) Courses steered.
- (3) Bearings or distances of land, lights, or other marks.
- (4) Names or positions of any ships sighted.
- (5) Movement in convoy.

(d) The secret log is to be kept by the master in which he is to record such information (enumerated in (c) above) as is necessary. When not in use, this secret log shall be kept in the overboard bag with the masters' confidential books.

(e) The various log books both secret and otherwise are to be produced for inspection when required by naval authorities and extracts are to be supplied to them if requested.

(f) On completion of a voyage at a port in continental United States the master shall turn over to the U. S. Navy routing officer his *secret logs*. At this time copies of the deck log and engine log, which comply with paragraph (c) above, may be furnished the owners and the War Shipping Administration, if desired.

Section 12. INTELLIGENCE REPORTS

11201. Merchant vessels can often obtain information pertaining to enemy ships' activities and material of the utmost value. Masters must instruct the personnel to be ever on the alert for such information. When obtained, it will be turned over at the first available

opportunity to the commandants of naval districts or their representatives, boarding officers from United States men-of-war, or United States consuls.

11202. Should any enemy or suspicious vessel be sighted whose name or class cannot be identified, the following particulars concerning her should be reported as provided in paragraph 11201. This report should *not* be made by radio.

(a) Exact date, time, position, and course when first sighted and last seen and estimated range.

(b) Number and position of masts and funnels, whether raked or upright, and in the case of funnels whether squat or high.

(c) Shape of bow and stern.

(d) Estimated dimensions and tonnage.

(e) Number, position, and size of guns.

(f) Number of torpedo tubes.

(g) Estimated speed.

(h) Peculiarities of painting or constructions. Whether well decked or flush, conspicuous derricks or ventilators.

(i) Whether fitted with radio.

(j) *Reasons for which considered suspicious.*

11203. The following particulars of mines or suspicious objects should be reported whenever possible (par. 11201):

(a) Accurate position where supposed mine or suspicious object was seen.

(b) Date and hour.

(c) Distance at which seen.

(d) Shape.

(e) Appearance.

(f) Color.

(g) Whether floating freely on surface or moored; if the latter, at what depth.

(h) Whether it had horns, and if so, how many, and whether one of them was in a central position.

(i) Any other details which can throw light upon whether it is a mine, a harmless buoy, or what it is.

(j) Whether sunk.

(k) A sketch showing as much detail as possible and giving approximate dimensions should be forwarded with the report.

11204. Fragments of mines, torpedoes, or shells found on board a merchant vessel after an explosion or action with the enemy may sometimes be of great value to the naval authorities. All such fragments must therefore be forwarded to the Navy Department through the nearest naval authorities at the first opportunity. Similarly, any bombs or other contrivances for causing fire or destruction to life, ship, or cargo, which may be found on board merchant vessels, are to be placed in charge of the nearest naval authorities at once.

Chapter II. SINGLE VESSELS

Section 1. SAILING INSTRUCTIONS—VESSELS OPERATING SINGLY

2101. Masters of United States merchant ships sailing unaccompanied on overseas or coastal voyages, from United States ports, must obtain routing instructions for the voyage from the commandant of the naval district of his representative.

2102. Sortie, or departure from harbor of vessels sailing unaccompanied will be made in accordance with instructions issued by the commandant of the naval district or his representative. Normally the commandant's detailed instructions in regard to sortie will be issued only to naval or civil pilots, in order that details of

harbor defense will not be disseminated to large numbers of individuals with consequent increased chances of leakage of information.

2103. Instructions issued by commandants of naval districts to masters will normally include:

- (1) Sailing time.
- (2) Assignment of pilots.
- (3) Routing instructions.
- (4) Information of the enemy.
- (5) Any special communication instructions.

2104. All instructions in regard to sailing, routing, convoys, etc., will be held as strictly confidential by the master. This is of vital importance. The master shall do everything within his power to impress upon the members of his crew the absolute necessity of refraining from discussion of their sailing date, route, convoys, or cargo as the future safety of themselves and others may depend upon this.

2105. Before sailing unaccompanied from foreign ports, masters will call upon the American consul, who will direct them as to the proper procedure for obtaining routing instructions. If calling at more than one port abroad, masters must obtain their instructions for the homeward voyage at the last port of call at which competent authority is located. When applying to United States naval or consular officials for routing instructions, a master must present proper credentials and take with him any orders already received as to his route.

2106. Before getting underway and while underway, all instructions in regard to watertight integrity contained in chapter I, section 7, will be strictly complied with.

Section 2. GENERAL ROUTING INSTRUCTIONS FOR VESSELS SAILING SINGLY

2201. Single ships, whether sailing independently or under escort, are not to pass through convoys if it can be avoided, but are to alter course as necessary so as to keep clear.

2202. All special traffic or route instructions are to be considered, for the particular area or voyage which they apply, as overruling all general instructions.

2203. As a route may be changed after a vessel leaves port on account of mines or other reasons, masters must be prepared to receive fresh instructions from patrol vessels or aircraft and must keep a good lookout for any signals made for this purpose.

2204. When receiving orders or warnings from patrol vessels or speaking stations, it must be realized that such orders do not cancel the ship's route instructions except in the particular point covered by such warnings.

2205. When orders are given to follow a detailed track in dangerous waters, the track must be strictly followed. Swept channels in most cases are very narrow, and a divergence of as little as a half mile will take the vessel into unsearched and dangerous waters.

2206. Whenever a master is ordered to make good a particular course or to make a certain rendezvous, every possible precaution must be taken to insure accurate navigation.

2207. Vessels should time their departure and progress along a route so as to reach danger zones, harbor entrances, channels, ocean passages, and restricted waters at the time indicated in their instructions. If on the high seas, they should, before reaching the critical areas, time their arrival either by zigzagging, circling, or steering on reversed course, according to the amount of

time to be disposed of, but the *speed* through the water shall not be reduced. Zigzagging should never be of a token character but should be carried out in accordance with ZIGZAG DIAGRAMS FOR SINGLE SHIPS AND CONVOYS, the 1940 edition being the current edition.

2208. If for any reason a vessel arrives at a port at other than at the prescribed times the port is open, she must remain underway at high speed, and on no account must she remain stopped in the vicinity of the port. (See above paragraph and CAMSI, pars. 11 and 57.)

2209. Smoke must be reduced to an absolute minimum both by day and night. The problem of smoke prevention requires careful and constant study on each vessel. The Engineer's Department shall be instructed in the methods devised for smoke prevention. Excessive smoking cannot be tolerated as it serves as a beacon for U-boats. Boiler tubes should be blown only during hours of darkness, care being exercised to prevent sparking.

2210. *Nothing that floats shall be thrown overboard nor shall bilges be pumped during daylight.* All waste material that can be burned shall be burned during hours of darkness (having due regard for par. 2209 above). Tin cans shall be well punctured before being thrown overboard. Garbage that cannot be burned shall be accumulated in suitable receptacles and thrown overboard simultaneously 1 hour after sunset each night, at which time bilges may be pumped if necessary. After throwing garbage overboard or pumping bilges an evasive course of at least several hours' duration should be steered.

2211. Fathometers of the impulse type give out an impulse which can be heard on the hydrophones of a submarine miles away. The newer type of fathometer which is directional in character can be picked

up only if submarine is close by, but this fathometer will cause acoustic mines to explode. Consequently, the use of a fathometer should be restricted to the minimum essential to safe navigation.

2212. If a torpedo is sighted approaching from forward of the beam turn toward it, if approaching from abaft the beam turn away.

Section 3. LOOKOUTS

2301. A sharp lookout is always essential, especially in submarine areas. *Alertness of the lookout is vital to the ship's safety* from submarine attack as well as collision. Practically the only defense of a ship at night is the lookout reporting a periscope or torpedo wake in time for the ship to be swung so as to avoid being struck.

2302. There shall be well protected and well arranged lookout stations situated as follows: High level stations (foretop if fitted) each side of navigating bridge, each side of superstructure deck, at the guns, and at such other places as may be deemed necessary. The Armed Guard crews will not stand lookout watches except at the guns.

2303. There should be telephone communication between the navigating bridge and all lookout and gun stations in addition to the usual communication system to ship control stations.

2304. While in a submarine danger zone it is important that both high level and low level lookout stations be manned, the latter being particularly important at night. Lookouts should frequently be checked and their watches should never exceed 2 hours in duration.

2305. Lookouts should be carefully selected for this important duty; keen eyesight, intelligence, and free-

dom from seasickness are essential qualities. It should be noted that men of equal vision in daylight do not by any means make equally good lookouts at night—so-called “night blindness” being much more common than is generally supposed.

2306. Each lookout shall be assigned a definite sector, which shall be limited to 45° , if possible, but never over 90° .

2307. An antiaircraft lookout watch should never exceed 1 hour in duration. It is recommended that antiaircraft lookouts be assigned in pairs to stand one-half hour on and one-half hour off through a 4-hour watch.

2308. Lookouts, when being relieved at night, should not leave their stations until the new lookout has accustomed his eyes to the darkness. This should require a period of at least 15 minutes.

2309. An especially sharp lookout is to be kept at dusk and dawn, as these times are particularly suitable for making submarine attacks.

2310. (a) All lookouts should be furnished with binoculars, and they should always use the same ones.

(b) Colored glass lenses to enable lookouts to look into the direction of the sun should be provided.

2311. At night, lookouts stationed lower down can best observe objects close aboard. Lookouts from bridge or crow's nest can best observe objects, especially ships, farther away, crossing the horizon. In the daytime, a periscope, torpedo, or submarine can best be seen from stations higher up—from the bridge wings, crow's nest, and regularly assigned lookout stations.

Section 4. DARKENING SHIP

2401. When in areas in which submarines, raiders, or aircraft are likely to be met, vessels are to be care-

fully darkened from sunset to sunrise, and are to proceed without navigational lights.

2402. Navigational lights are not to be exhibited except in areas explicitly designated by the routing instructions. When exhibited dimmed navigation lights consisting of sidelights visible 1 mile and a *single* masthead light visible 2 miles are to be shown.

2403. Arrangements are to be made by which the navigational lights can be shown temporarily in case of necessity. To enable this to be done effectively and with a minimum of danger, the following should be carried out:

(1) In ships fitted with electricity, circuits are to be so arranged as to permit of the lights required being turned on or off together from the bridge.

(2) In ships fitted with oil lamps only, convenient shutters are to be fitted over the side lights so that these can be exhibited or obscured from the bridge; masthead light is to be kept obscured and ready to hoist and show temporarily.

(3) Suitable arrangements must be made to enable the chart to be consulted without showing a light outboard. Arrangements must also be made to provide a suitable shaded light for the compass, and any other bridge instruments having illuminated faces.

(4) A hand flashlight or blinker tube should be ready on the bridge at all times for emergency use.

2404. *The thorough darkening of the ship from sunset to sunrise is of vital importance.* It must be borne in mind that one light insufficiently screened or even the reflection of a light (particularly on white paint) will betray the presence of the vessel to any hostile craft.

2405. The main points which require particular attention are the following:

(1) All windows or ports of cabins, smoking rooms, lounges, alleyways, etc., which open onto the deck or

the side of the ship, especially when situated on the promenade deck, are either to be fitted with shutters or have the glass painted over.

(2) Troop spaces, crew spaces, officers' quarters, and main stairway entrances from upper deck must have bulbs of low candlepower, only sufficient to give dim light and placed down near the deck so as not to give general illumination.

(3) Cabins, smoking rooms, etc., with doors opening directly onto the main decks, must have screens or curtains to form a "light lock."

(4) In the case of cabins, chart rooms, etc., fitted with electric lights and opening directly onto the upper decks, switches that operate by closing of the doors, so that lights cannot be switched on with the door open, are of great value.

(5) Engine room hatches, uptakes, etc., must be fitted with screens or battens to prevent any light from showing upward.

(6) All master switches should be rigged with preventers to insure against accidental illumination.

(7) In addition to the above, there shall be provided, if possible, an auxiliary or emergency electrical circuit operated from storage batteries, which will be available for use in the event of a casualty to the boiler or generators. The control switch for this circuit shall be on the bridge. This circuit shall be used to supply light, in emergency, to the following places: Troop and crew spaces, passageways in superstructure decks, engine rooms and fire rooms, radio room, boat lowering, and abandon ship stations.

2406. A patrol shall make constant rounds to insure that the orders regarding darkening are observed throughout the ship. For this purpose the patrol shall have free access to every compartment that can possibly show a light outboard or overhead.

2407. All unnecessary lights must always be kept switched off.

2408. Notices are to be kept posted in conspicuous places calling attention of the crew, passengers, and troops to the great danger of exposing lights.

2409. Before the ship leaves port, a careful inspection is to be made to see that all compartments have been made to comply with the above instructions. The ship should be darkened and an officer sent around her in a boat to ascertain whether or not lights can be seen from outboard. While this inspection is in progress a member of the crew should be detailed to inspect cabins, saloon entrances, etc., to insure that all cut-out switches and screening devices are in good order.

2410. *Smoking shall not be permitted on deck after dark. The glow of a cigarette is frequently visible for half a mile.*

2411. *The use of hand flashlights on open decks is forbidden.* Before going to sea, all hand flashlights, except those specifically authorized by the master, shall be collected and locked up. This applies to passengers as well as to the crew of the vessel. As the fixed lighting system is liable to be put out of commission if the ship is damaged, electric hand flashlights should be stored in Emergency Light Boxes which should be secured to bulkheads at various convenient locations such as the engine and boiler rooms, on the bridge and in access passageways.

Section 5. SHIPWRECKED MARINERS

2501. Any vessel meeting with boats containing shipwrecked crews must approach them with caution, keeping a good lookout and taking every precaution to render a surprise torpedo attack impossible. Before approach-

ing such boats, courses should be steered to permit scouting of the water on all sides of them.

2502. Empty boats may sometimes be used as decoys by enemy submarines. If objects judged to be decoys are sighted, the precaution should be taken to zigzag and alter course frequently.

2503. If the master then considers it safe to render assistance, he may do so; the survivors from the boats must be removed as rapidly as possible. If the weather permits, the ship should not be stopped dead, but should steam slowly ahead, constantly turning under rudder.

2504. A report of mariners rescued must be made as soon as possible to any naval vessel sighted and full details given immediately upon arrival in port. If the shipwrecked mariners are rescued *in an area recently free from enemy operations*, and if unable to make the above visual report promptly, a report should be made by radio to the nearest naval station as soon as safe to do so.

2505. If the master does not consider it safe to render assistance, he must inform the nearest naval authorities as soon as safe to do so, by visual signal if practicable, otherwise by radio.

Section 6. COMMUNICATIONS

2601. Communications, by radio, visual signals, underwater sound, mail, carrier pigeon, or by other means, shall be carried out in accordance with such communication instructions as may be issued by the Navy Department to merchant vessels. Masters will familiarize themselves with these instructions upon receipt thereof.

2602. When in the presence of other vessels or aircraft, an efficient bridge signal watch shall be maintained. Identification signals shall be broken out

promptly in answer to challenging shore stations, aircraft, or ships as delay may result in fire being opened by the challenger.

2603. A sharp lookout should be maintained for warning signals from any airplane in the vicinity. Signal lights, diving and zooming, rocking the wings, gunning the engine, and firing short bursts with machine guns, are standard methods used to communicate warnings by airplanes.

2604. Press news may be copied and distributed after having been censored by the master.

Section 7. MISCELLANEOUS

2701. Over 1,000 merchant seamen have been questioned as to their experiences as survivors of attacks from submarines, aircraft, surface raiders, and motor torpedo boats. The following points were brought out as a result of these interviews:

(a) Wooden lifeboats are frequently pierced by splinters and flying fragments. Rope falls are frequently cut and are often burned by the flames of an explosion. All projections, such as knees, brackets, and bolts in lifeboats should be countersunk. In crowded lifeboats such projections cause much discomfort and suffering to the occupants.

(b) In order to facilitate the sighting of lifeboats their insides and bottoms should be painted a bright flaming orange color. In several cases survivors have clung to upturned lifeboats and have not been sighted by searching air and surface craft. Sails of lifeboats should also be painted bright orange. Smoke candles which produce a colored smoke have been the means of saving survivors adrift in lifeboats. Some merchant vessels have stocked their lifeboats with rockets and pyrotechnic flares and with "Fluoriscene," a powder

which will spread a large red patch on the sea and attract the attention of passing aircraft. A small hand-powered Klaxon horn has proved useful in directing rescuing vessels to boats in poor visibility.

(c) British seagoing merchant vessels are required to outfit their lifeboats with portable battery-powered radio sets. These sets have been the means of saving life in many instances. Care should be taken with such sets to see that the batteries are fully charged and are protected from sea water.

2702. *Planning and foresight will foil many attacks. It will always minimize loss. Try to envisage all eventualities and have a definite plan of action.*

2703. Every effort should be made to keep a vessel moving and fighting as long as is humanly possible. Undue haste in abandonment can never benefit anyone but the enemy and frequently occasions unnecessary loss of life.

2704. If abandonment is to be carried out, a vessel's engines should be immediately shut down (after using reversed engines if feasible) and the vessel brought to a full stop. Engines should not be stopped, however, unless abandonment is intended except when the apparent damage or lack of compartmentation in a particular vessel necessitates such actions. In the last analysis the master must decide whether stopping and thus making a perfect target for a submarine or continuing and thus risking sudden flooding presents the greater risk.

2705. If a ship is in relatively shoal water anchors should be let go before abandoning as such action may enable salvage to be undertaken subsequently.

2706. Not only should engines be stopped before abandoning but also, the fuel oil supply must be cut off. The engine room crew should be *thoroughly* drilled in

what to do in the event of the ship being torpedoed, for it is only by this method that one can hope for correct action in a crisis.

2707. Confidential publications and secret logs must be thrown overboard in a weighted bag before abandoning the vessel.

2708. The following suggestions have been deduced from accounts given by survivors of recent torpedoed ships and are to be carefully noted by all hands:

(a) Always abandon ship as far forward of the torpedo hit as possible.

(b) Know the direction of the wind before abandoning ship and go to windward when possible, though always abandon from the opposite side of the torpedo hit.

(c) Get into a boat without entering oil-covered water if possible.

(d) Because of danger of injury avoid floating wreckage when abandoning ship.

(e) Always jump feet first. Do not dive.

(f) Breast stroke or side stroke is the best to use while swimming through oil slick.

(g) Keep your head high and eyes and mouth closed while swimming through oil slick. Oil has many dangerous characteristics. First, the vapors from thin oil (so-called) are very poisonous and will cause death if inhaled to any extent. Second, heavy oil (so-called) forms a thick coating on the surface of the water and has a tendency to engulf the swimmer. Both types of oil are very injurious to the eyes and will cause death if swallowed in any great quantity.

(h) Try to swim under water as much as possible while making way through fire or heavy oil slick.

(i) Relax and conserve energy with the idea always present in mind of staying afloat.

(j) Proceed in any easy and slow manner to the nearest boat, raft, or floating object and cling to this until rescued.

Chapter III. RIGHTS AND DUTIES OF MERCHANT VESSELS IN TIME OF WAR

3101. Modern war is sustained by industry, and this industry is dependent upon a continuous supply of raw materials and semi-finished articles. While the United States is fortunate in being largely self-sustaining, nevertheless, particularly to support a large war effort, it is necessary to import materials from overseas. Any failure of a cargo to arrive safely will slow the wheels of industry. Moreover, some of our military and naval operations are being conducted far distant from our shores and are dependent upon the safe arrival of vessels carrying troops, provisions, fuel, ammunition, and other supplies essential to the prosecution of the campaign.

3102. While the Navy is making every effort to make the seas safe for our merchant shipping, and to afford the Merchant Marine every possible protection, no defense can be sufficiently thorough throughout the seven seas to preclude isolated attacks by surface raiders, submarines, and aircraft. Much of the time the safe arrival of a merchantman will depend upon the knowledge and good judgment of the master, and upon his heroism and that of his crew.

3103. It is the clearly established right of a merchant ship to do all she can to avoid capture either by flight or resistance. The right of an enemy warship or aircraft to capture her if possible and the right of the merchant ship to avoid or resist capture are recognized as equally justifiable.

3104. To avoid capture the master may alter his course or speed as necessary to elude a suspected enemy; he may do his utmost to outdistance an enemy; or he may avail himself of darkness or thick weather or the use of smoke to shake off pursuit.

USE OF FORCE BY DEFENSIVELY EQUIPPED MERCHANT SHIP

3105. The right to resist.—To resist capture the master has the definite right to use his defensive armament in the following circumstances:

Conditions Under Which Fire May Be Opened

3106. Against an enemy acting in accordance with International Law.—As the armament is solely for the purpose of self-defense, it must only be used against an enemy who is clearly attempting to capture or sink the merchant ship. Once it is clear that resistance will be necessary if capture is to be averted fire should be opened immediately.

3107. Against an enemy acting in defiance of International Law.—As the war progresses, it unfortunately becomes clear that, in defiance of International Law, the enemy has adopted a policy of attacking merchant ships without warning. It is, therefore, permissible to open fire on an enemy surface vessel, submarine, or aircraft, even before she has attacked or demanded surrender, if by doing so the enemy can be prevented from gaining a favorable position for attacking. Before opening fire United States colors must be hoisted.

Conditions Under Which Fire May Not Be Opened

3108. Fire must never be opened by a ship which has already signified her surrender, by stopping when

ordered, by hauling down her colors, or in any other way. Similarly, if a ship defends herself but subsequently surrenders, she must at once cease firing and must not reopen fire.

The above does not, however, preclude a ship which has been captured from subsequently endeavoring to escape or undergoing recapture by a friendly warship.

A merchant ship armed for self-defense must not, under any circumstances, interfere with, or obstruct the free passage of, other merchant vessels or fishing craft, whether hostile or neutral.

Noncombatant Status

3109. By using force to resist capture a ship does not lose her noncombatant status. There is a distinct difference between the exercise of the right of self-protection and the act of cruising the seas in an armed vessel for the purpose of attacking enemy vessels.

By resisting, however, the master necessarily accepts the risks which may result from the enemy using force in reply, to effect the capture of his ship, but the force that the enemy is entitled to use is such only as is needed to prevent escape or overcome resistance. An attempt at escape or resistance does not entitle the captain of the warship or aircraft to sink the merchant ship out of hand, nor does it entitle him, once the escape has been prevented, or the resistance overcome, to pay no further attention to the safety of the crew and passengers.

LEGAL OBLIGATIONS OF BELLIGERENT

3110. General.—The employment against merchant shipping of submarines and aircraft has somewhat complicated a belligerent's duty of only using an amount of force necessary to overcome resistance or

prevent escape. Though this does not affect the legal obligations under which they act, it is unfortunately clear from war experience that these craft habitually disregard International Law and perpetrate the illegality of attack without warning—on the presumption that warning would be countered by successful resistance or flight on the part of the merchant ship. Under these circumstances, resistance is essential, whatever the odds, for it will afford the only way of escaping destruction.

3111. Visit and search.—Should a merchant ship be unable to escape from an enemy who is of such force (e. g., a cruiser) that resistance would lead only to needless loss of life, the master must then perforce submit by stopping his ship when ordered to do so. When a warship orders a merchant ship to stop, it is usual for the warship to send an officer to visit, and if necessary search her. The object of the visit is to ascertain the merchant ship's identity and cargo. The formality of visit may, however, be dispensed with, if the commanding officer of a warship is sufficiently sure of the merchant ship's nationality to risk the complications which would ensue if she proved to be a neutral.

LEGAL OBLIGATIONS OF AND TOWARD A PRIZE

3112. General.—The procedure enjoined by International Law on a master who finds himself forced to surrender is that he shall stop his ship and thereafter consider her as a prize. That is all that is legally required of him. It is for the enemy to take physical possession of the ship and to assume responsibility for her navigation and safe custody. The master, therefore, is under no obligation to navigate his ship in accordance with the orders of his captor or to refrain from an attempt at recapture and escape if a suitable oppor-

tunity presents itself. But, despite this, it is of course possible that obedience to such orders may be compelled by force, to which the master may consider it best to submit rather than to incur loss of life.

3113. Prize crew.—Having captured a merchant ship it is the normal duty of a warship to put a prize crew on board and send the ship into one of her (the warship's) harbors to be put into a Prize Court with a view to condemnation.

ESCAPE

3114. The master of a United States ship compelled by superior force to submit to capture or to follow the orders of an enemy, should at once seize the opportunity to escape if the enemy disappears and thus fails to keep him under continuous and effective control, or if any other suitable opportunity occurs. In such circumstances the enemy, if he reappears, is not entitled to use force against him by way of retaliation, but only if he fails to observe a fresh order to submit or to steer a specified course.



that the present is not. But despite this it is of course possible that objections to such orders may be compelled by force, in which case the master may consider it best to submit to them rather than to incur the risk of his

2114. Price crew—This crew consisted of a merchant ship. It is the highest duty of a warship to put a price crew on board and send the ship on its way (the warship) and to be put into a Price Crew with a view to condemnation.

RECAPITULATION

2115. The master of a United States ship compelled by superior force to submit to capture or to follow the orders of an enemy, should at once seize the opportunity to escape if this, under the circumstances and that fails to keep him under confinement and effective control, or if any other suitable opportunity occurs. In such circumstances the master is not entitled to resist, but only if he fails to observe a fresh order to submit or to cover a fresh course.

