PROCEEDINGS OF THE MARINE SAFETY COUNCIL



DEPARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

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February 1974

International pollution agreement . . .

International Ice Patrol 1974 . .

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COVERS

FRONT COVER: With the energy crisis growing, increased exploitation of our offshore oil reserves can be expected. Pictured on our front cover is the *Ocean Scout*, the first semisubmersible oil well drilling rig to be built on the East Coast. The rig was built for Ocean Drilling & Exploration Co. of New Orleans. *Courtesy Bethlehem Steel*.

BACK COVER: Deadly icebergs like this one, photographed during the 1973 International Ice Patrol, will menace shipping during the iceberg season this year. Participation in the International Ice Patrol communications network can help to minimize the dangers.

PROCEEDINGS

OF THE

MARINE SAFETY COUNCIL

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Admiral C. R. Bender, USCG Commandant

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The Marine Safety Council of The United States Coast Guard

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The membership may be expanded by the Commandant or Chairman, Marine Safety Council to deal with special problems or circumstances.

Lieutentant (jg) A. W. Vander Meer, Jr., Editor

metion of Pollution

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INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

The International Conference on Marine Pollution was held in London from October 8 to November 2, 1973, and negotiated a new International Convention for the Prevention of Pollution from Ships, 1973.

At that conference, the U.S. delegation was apparently more successful in achieving its position than it anticipated. The Convention adopted by the Conference incorporates most of the provisions the United States felt were necessary for a meaningful and effective agreeement. The Coast Guard believes the Convention constitutes a substantial improvement to existing international law governing control of pollution from ships. Its provisions may well meet the goals of the Ports and Waterways Safety Act. Before we come to a definitive conclusion on this issue, however, further analysis and study are necessary.

It may be profitable to compare the new Convention with international law now in force (1954 Convention as amended in 1962), to illustrate the progress which this Convention truly represents. Appended to this article is a comparison of certain major features of the new Convention with those of the 1954 Convention. This comparison amply demonstrates the significant progress achieved by the international community at the October Conference.

The Conference, in making these strides, recognized that until the new Convention enters into force, the only

effective multilateral agreement on pollution prevention is the 1954 Convention. A resolution was adopted by the Conference urging nations to ratify the amendments to the 1954 Convention. It is hoped that the Senate will expeditiously give advice and consent to the 1971 amendments to the 1954 Convention pertaining to the Great Barrier Reef and Tank Size Limitations, as they will significantly enhance protection of the environment. While implementing legislation has already been enacted, Public Law 93-19, the statute has no effect with respect to these matters until the amendments come into force. United States ratification at an early date would encourage other nations to follow suit, thus hastening the day when the amendments and our domestic legislation will be implemented.

The Marine Pollution Convention is but one of a family of international agreements, some presently in force, which taken as a whole represent a comprehensive approach to the international regulation of shipping for the preservation of human life, the protection of property, the prevention of pollution, and the adequate compensation of the victims of marine casualties and pollution incidents. These agreements are interrelated and should be viewed as constituting parts of an integrated whole.

The Federal Water Pollution Control Act (FWPCA) calls upon the executive branch to reach agreements with other nations with a view toward upgrading international environmental protection laws. This 1973 Convention is an agreement which fulfills that mandate to a substantial degree.

With this general insight into the broad and comprehensive nature of the 1973 Convention, the Ports and Waterways Safety Act of 1972, and its relationship to the Convention should be considered. Section 7(C) of title II of that act provides for analyzing international marine environmental protection agreements with a view to the establishment of consonant domestic rules and regulations. The Coast Guard and other Federal agencies concerned must now analyze this Convention, which will in all probability become the internationally accepted standard for the prevention of pollution from ships, and determine whether and to what degree it provides for the protection of U.S. waters.

In conducting this analysis, it should be noted that the Conference, recognizing that the new Convention deals with the problem of accidental pollution only to a limited extent, adopted a resolution recommending that the International Maritime Consultative Organization (IMCO) continue its work with a high priority on the development of measures for the minimization of accidental spillages. This resolution specifically cites

Торіс	1954 Convention (as amended in 1962)	1973 Convention
Applicability as regards carriage of oil	Seagoing tankers over 150 gross tons Other seagoing ships over 500 gross tons	 All tankers over 150 gross tons. All other ships over 400 gross tons including novel craft
Dispute settlement	1. Referred to International Court of Justice unless all	and fixed and floating platforms. 1. Compulsory arbitration by specially formed tribunals upon application of any party to dispute.
Amendment procedure	1. Effective only upon specific acceptance via IMCO	1. Speedier method for annexes and appendices via IMCO Committee and tacit acceptance procedures.
Survey and certification	1. No comparable provision	 Survey at 5-year intervals and at intermediate (mid period) intervals. Equipment must be approved by Administration (monitors, filters, separators, interface detectors). Administration issues certificate attesting to compliance by its ships, which certificate shall be accepted except when there are clear grounds to believe the ship is not
Definition of oll	1. Limited to crude, fuel, heavy diesel and lubricating oils	in compliance. 1. Includes all petroleum oils except petrochemicals (which
	 Does not include bilge slops and fuel and lube oil purifi- cation residues. 	are regulated by annex 11).
Discharge criteria in prohibited zones (this term does not appear in the 1973 Convention which uses a distance from land criterion).	 Prohibits discharges by all ships in concentrations in excess of 100 parts per million within the prohibited zones. 	1. Prohibits discharges which leave visible traces unless it can be established by installed instruments that the concentration discharged was less than 15 parts per million.
	 Prohibited zone generally 50 miles or greater from nearest land for tankers. Prohibited zone applies to other ships unless proceeding to a port not provided with adequate reception facilities. Non-minimum from a ship less than 20 000 	 For tanker cargo slops, discharge is prohibited within 50 miles from nearest land. For other ships slops, and other tanker slops, discharge is prohibited within 12 miles from the nearest land. Tenkers must meet all the following conditions:
Discharge criteris outside of the promoted zones.	1. No restriction on discharges from a simples that show gross tons. Vessels over 20,000 gross tons are limited to discharges whose concentrations are 100 parts per million or less, unless when in the opinion of the master, cir- cumstances make it unreasonable or impractical to retain the higher concentrated slops on board.	 a. Ship is proceeding enroute. b. Discharge is limited to 60 liters per mile instantaneous rate. c. Total quantity discharged is limited to 1/15,000 of cargo last carried for existing tankers and 1/30,000 of cargo last carried for new tankers. d. Tanker bilges, except pump rooms, shall be treated same as other ships.
Enforcement mechanism	1. No comparable provision	 Other ships must meet all of the following conditions: Ship is proceeding enroute. Oil content of the effluent must not exceed 100 parts per million. Requires that the monitoring and control system be in operation and a permanent record made anytime olly effective is been discharged encounter being discharged encounter bencounter being discharged enco
		ballast.
Construction and equipment requirements to control operational discharges of olly mixtures.	1. No comparable provision	 Segregated ballast is mandatory for new tankers of 70,000 deadweight tons and greater, and is optional for tankers of less than 70,000 deadweight tons. Note that "new" tankers are defined by calendar dates and are therefore not dependent upon entry into force of this Convention. Retention of oil on board (LOT) is mandatory for all tankers. Mandatory installation of effluent monitor and control system, provision of slop tanks, and provision of oil/ water interface detectors. Effluent must comply with discharge criteria or be transferred to reception facility. Other ships require sludge tank installations, oil water
Reception facilities	 Provision to promote according to need of ships using ports. 	 separator and/or litters dependent upon snip size. Expanded provision to undertake to insure availability and adequacy at oil loading ports, repair ports and at other ports according to the needs of ships.
Oil record book	1. Establishes basic requirement to provide oil record book and requires entries for specific operations.	1. Expands requirements to provide entries for more specific operations and in greater detail to aid in en- forcement.
Construction requirements to limit the amount of oil discharge in case of ac- cidents.	1. No comparable provision	 Establishes damage assumptions and methods of calculation of the amount of hypothetical oil outflow for tankers. Establishes tank arrangement and size limitations for the cargo tanks of tankers. Establishes subdivision and damage stability criteria to be applied to tankers to increase survivability in the event of accident.

Topic	1954 Convention (as amended in 1962)	1973 Convention
Additional annexes for substances other than oil. Annex II is mandatory and an- nexes III, IV and V may be adopted at the motion of contracting States.	1. No comparable provision	 Annex II details mandatory requirements for construction of chemical tankers and discharge criteria for liquid noxious substances in bulk. Annex III contains regulations for the prevention of pollution by harmful substances carried at sea in pack aged form, or in freight containers, portable tanks of road and rail tank cars. Annex IV contains regulations for the prevention of pollution by sewage from ships. Annex V contains regulations for the prevention of pollution by sewage from ships.

measures regarding safe navigational procedures and traffic separation schemes, watchkeeping practices aod the training and certification of seamen, provision of modern navigational and communications equipment, operational procedures during cargo transfer, maneuverability and controllability of large ships, and construction and equipment of ships carrying oil or noxious substances. This resolution, in effect, shapes the work program of the technical committees of IMCO for the immediate future.

It is important to note that the 1973 Convention contains provisions for accelerated amendment procedures for technical annexes, a feature not included in the 1954 Convention. This feature will facilitate the timely adoption of the work product of the IMCO technical committees with respect to the measures contemplated by the resolution just described. If we identify regulatory provisions of the Convention which are not fully adequate, the implementation of multilateral decisions through the rapid amendment process may well be the preferred method of attaining adequacy, in lieu of acting unilaterally.

In adjudging the sufficiency of the Convention in respect to the Ports and Waterways Safety Act, it must be recognized that unilateral action presents intrinsic dangers. The United States should avoid unilateral action which would result unnecessarily in economic disadvantage to the U.S. Merchant Marine. We should also avoid unilateral action which would impede the ratification of the Convention by other nations. And we should avoid any unilateral action which would encourage the proliferation of differing regulatory schemes imposed by individual nations. It was a central article of faith at the Conference, in abandoning inclusion of ao article formally limiting unilateral action, that all nations would act respoosibly in substantial conformance with the Convention provisions. Because of the recognition by other nations of the operative thrust of the Ports and Waterways Safety Act, any actions by the United States will be followed with great interest by other governments in formulating their policies with respect to ratification of the Convention and possible measures in response to U.S. unilateral action.

If standards are imposed on only U.S. flag vessels stricter than those standards adopted internationally, serious inequities could arise when U.S. vessels call in U.S. ports alongside foreign vessels engaged in the same trade but not subject to the same regulatory constraints. Furthermore, such an approach would not enhance the protection of the marine environment in any effective way, since the majority of sea-going vessels entering U.S. ports are under foreign flag.

At this time it is the Coast Guard's hope that the United States can accept the Convention as being consistent with the interests of the United States, with the implementation of additional vessel operational controls where necessary to meet unique environmental demands. Examples of such operational controls are improved traffic management, mandatory use of sufficient tugs and improved navigation systems.

In closing, in the preparatory work for the Conference, and during the Conference deliberations, the U.S. delegation tried to provide for all the varying interests of the United States in an international agreement that would also satisfy the particular requirements of the Ports and Waterways Safety Act. In the course of negotiations, however, it was of course necessary to recognize the particular problems of other nations. Now we must assess the Convention in the light of U.S. interests and requirements. The questions which must now be studied are:

Does the Convention provide the proper balance between the environmental and economic interests of the United States?

If it does not, is unilateral action necessary, or should we seek and will we be satisfied with appropriate amendments to the Convention through the new rapid amendment procedure?

The Coast Guard plans to report to the Senate Commerce Committee on this matter prior to the initiation of proposed rulemaking procedures and subsequent public hearings.

ED. NOTE: This article was adapted from a statement of Admiral C. R. Bender, Commandant, U.S. Coast Guard before the U.S. Senate Commerce Committee.

INTERNATIONAL ICE PATROL 1974

In February or March 1974, depending upon iceberg conditions, the International Ice Patrol will commence its annual service of guarding the southeastern, southern, and southwestern limits of the regions of icebergs in the vicinity of the Grand Banks of Newfoundland for the purpose of informing passing ships of the extent of this dangerous region. Reports of ice in this area will be collected from passing ships and from flights by Ice Patrol aircraft, Information on ice conditions is provided by the Ice Patrol at 0000 G.m.t. and 1200 G.m.t. each day in an Ice Patrol Bulletin which is sent out by radio and landline circuits. (See Table 1.)

All shipping is requested to assist in the operation of International Ice Patrol by reporting all sighting of ice at once to COMINTICEPAT via the radio stations listed in the following section. When reporting ice please include the following information:

1. Position of ice.

2. Size of ice (for icebergs).

Concentration of ice (for sea ice, in eighths).

 Thickness of ice (for sea ice, in feet).

Table 2 may be used to aid in reporting icebergs to the Ice Patrol.

In addition to ice reports, sea surface temperature and weather reports are of importance to the Ice Patrol in predicting the drift and deterioration of ice and in planning aerial patrols. Shipping is urged to make sea surface temperature and weather reports to the Ice Patrol every 6 hours when within latitudes 40° to 50° N. and longitudes 42° to 60° W. Ships with but one radio operator should prepare the reports every 6 hours as requested and hold them for transmission when the radio operator is on

BROADCASTS OF THE ICE PATROL BULLETIN

RADIO STATION	TIME OF BROAD- CAST (GMT)	FREQUENCIES (kHz)
CW Broadcasts Coast Guard Communica-	0018	5320, 8502.
Boston/NIK Coastal Radio St. Johns/	1218 0000 and 1330	8502, 12750. 478.
Maritime Command Radio Mill Cove/CFH	0130 and 1330	438 (off second Thursday each month from 1200– 1600 GMT), 4356.5, 6449.5, 8662, 12984, 17218.4 and 22587 (on request)
Naval Radio Norfolk/ NAM	0430 and 1700	88.0 (except 1400–2000 GMT on Tuesday when transmissions will be made on 134.9kHz.), 5870, 8090, 12135, 16180, 20225, 25590 (Note: 20225 and 25590 activated daily 1200–0000 GMT).
Radiofacsimile Broadcasts Coast Guard Communica- tions Station	1600	8502, 12750 (drum speed 120).
Naval Radio Norfolk/ NFAX	0320 and 1520	3357, 4957, 8080, 10865, 16410, 20015 (Limits of all known ice, sea ice and icebergs on sea- beiet chart)
CANMARCOM/CFH	0000 and 1200	133.15, 4271, 9890, 13510, 17560, (drum speed 120). (primarily sea ice in Gulf of St. Lawrence and North. Limits of icebergs some-
Radio Bracknell/GFE	1400	18261 (drum speed 120)
Radio Quickborn/DGC	0905 (Repeated at 2145) (Weekdays	3695.8 (drum speed 120) (W. Atlantic Ice
Radio Quickborn/DGN	1905 (Repeated at 2145) (Weekdays only).	13627.1 (drum speed 120) (W. Atlantic Ice Chart).
Special Broadcasts Coastal Radio St. Johns/ VON	As required when ice- bergs are sighted outside the limits of ice between regularly scheduled broad- casts.	Preceded by International Safety Signal (TTT) on 500 kHz.

watch. When reporting, please include the following:

- 1. Ship position.
- 2. Course and speed.
- 3. Visibility.
- 4. Air and sea surface temperature.
- 5. Wind direction and speed.

It is not necessary to make the above report if the ship is making routine weather reports to METEO WASHINGTON.

Radio Stations

Ice sightings, weather, and sea surface temperature should be reported to COMINTICEPAT through Coast Guard Ocean Station vessels. Coast Guard Stations, and, if unable to work U.S. Coast Guard Stations. Canadian Coastal Radio St. Johns/ VON on the frequencies indicates on Table 3. Merchant ships calling to transmit Ice Patrol traffic are requested to use the regularly assigned international call sign of the station being called; however, Coast Guard stations will be alert to answer NIK or NIDK calls if used. Calling and traffic passing should be as shown on Table 3.

Gulf of St. Lawrence Information

Ice information services for the Gulf of St. Lawrence, as well as the approaches, from 58°00' W. to 66° 30' W. longitudes including the Strait of Belle Isle to west of Belle Isle itself, are provided by the Canadian Department of Transport during the approximate period December to late Junc. Ships may obtain ice information by contacting Ice Operations Officer, Dartmouth, Nova Scotia via Sydney Marine Radio (VCO) or Halifax Marine Radio (VCS). Details of the service are available from Ice Operations Office, Marine Services Information Center, Ministry of Transport, P.O. Box 1013, Dartmouth, Nova Scotia, Telephone 902-426-5664. Telex 019-22625.

Warnings

1. Shipping is reminded that in spite of the best efforts of the Ice

ICEBERG IDENTIFICATION

SIZE		HEI	GHT	LENGTH				
			Meters	Feet	Meters			
Growler Bergy Bit Small Iceberg Medium Iceberg Large Iceberg Very Large Iceberg		Less than 4 4–20 20–50 50–150 150–250 More than 250	Less than 20 20–50 50–200 200–400 400–700 More than 700	Less than 6 6-15 15-61 61-122 122-213 More than 213				
Shape			Descripti	on				
Blocky Drydock Dome Pinnacled Tilted-Blocky Tabular	Steep sides with flat top. Very solid. Length-Height ratio than 5–1. Eroded such that a Large U-shaped slot is formed with columns. Slot extends into or near waterline. Large round smooth top. Solid type iceberg. Large central spire(s) or pyramid(s) dominating shape. Blocky iceberg which has tilted to present a triangular s from the side. Flat topped iceberg with length-height ratio greater than							

Table 2

CALLING AND TRANSMISSION OF TRAFFIC

Purpose	Frequencies which should be used						
Calling	 500 kHz (If 500 kHz is being used for distress traffic then 512 kHz may be used as supplementary calling frequency). 2182 kHz (voice). Assigned HF (CW) calling frequencies. 						
Working Frequencies							
Ocean Station Vessel 4YB (to be disestablished lune 30, 1974).	466 kHz (CW), 2670 kHz (Voice).						
Ocean Weather Station 4YH (oc- cupied August 1, through April 15 only)	466 kHz (CW), 2670 kHz (Voice).						
Coast Guard Communications Sta- tion Boston/NMF.	472, 8728, 12934.5, 22487.5 kHz (CW).						
Coast Guard Communications Sta- tion Portsmouth/NMN.	466, 8465, 12718.5, 17002.4 kHz (CW) 2670 kHz (Voice).						
Canadian Coastal Station St. Johns/ VON.	478 kHz (CW).						

Table 3

Patrol to prevent such occurrences, icebergs have and will drift unnoticed into the usual shipping routes in the area of the Grand Banks. The positions of icebergs in the Ice Bulletin are updated for drift at 12 hour intervals. However, it is stressed that after about 5 days the positions estimated by drifting are very unreliable. Date of an iceberg sighting is indicated in the Ice Bulletin.

2. In general, only icebergs south of about 48° N. are included in the Ice Bulletin. In the event there are large numbers of icebergs south of 48° N., the Ice Bulletin will carry the positions of only those icebergs near the limits of ice and isolated icebergs or iceberg groups.

3. Carefully conducted tests by the Ice Patrol have proven that radar cannot provide positive assurance of iceberg detection. Since sea water is a better reflector of radar signals than ice, an iceberg or growler inside the area of sea return on the radar scope may not be detected. The average range of radar detection of a dangerous growler, if detected at all, is only 4 miles. While radar remains a valuable aid for ice detection, its use cannot replace the traditional caution exercised in the vicinity of the Grand Banks while transiting south of the estimated limits of all known ice.

Comments concerning operation of the Ice Patrol, particularly concern-



The Coast Guard frequently works out of the Canadian Air Force Base on Prince Edward Island, pictured above, on its missions for the International Ice Patrol.

ing the effectiveness of the times and frequencies of radio transmissions, are of much interest to the Ice Patrol and are earnestly solicited. Comments may be directed to Commander, International Ice Patrol, Building 110, Governors Island, New York, N.Y. 10004. Ships are also requested to mail facsimile charts received at sea to the same address. Please indicate the frequency used and date, time, and position when the facsimile broadcast was received on the chart. \ddagger

CONTROL YOUR FATE-VENTILATE!

PRECAUTIONS ON ENTERING CLOSED SPACES

Remember—Stale Air Can Kill

1. Know how long compartment has been closed and ventilate accordingly before entering—even if it has been empty—rust scale oxidizes and uses up oxygen. This is especially true of deep tanks.

2. Some supposedly inert cargoes such as ores, ore concentrates, fishmeal, metal turnings and borings are susceptible to oxidation while in the vessel and caution should be observed before entering to insure that sufficient oxygen is present. This is especially important where steel hatches are sealed to keep out damp air which may promote spontaneous combustion.

3. Know what the compartment you are about to enter contains! There may be cargoes present which are re-

quired to be fumigated such as grain, tobacco, etc., which harbor noxious, trapped gasses.

4. Always report your intentions before entering a compartment to another person. Whenever possible do not enter alone.

5. Know where the oxygen breathing apparatus, gas mask, and flame safety lamp are located—know how and when to use them.

6. Never enter a compartment to rescue an overcome person—without completely considering the circumstances—the same fate may befall you—use a lifeline in conjunction with the equipment mentioned in item 5 above.

-Courtesy National Cargo Bureau

February 1974

MODERNIZATION OF THE INTERNATIONAL RULES OF THE ROAD

By Capt. W. W. Barrow and Cdr. J. M. Duke, USCG

ED. NOTE: This is the sixth and final of a series of installments on the modernization of the International Rules of the Road. The views expressed are those of the authors and do not necessarily reflect those of the Commandant or of the Coast Guard as a whole.

ANNEX I

POSITIONING AND TECHNICAL DETAILS OF LIGHTS AND SHAPES

1. Definition

The term "height above the hull" means height above the uppermost continuous deck.

2. Vertical positioning and spacing of lights

(a) On a power-driven vessel 20 metres or more in length the masthead lights shall be placed as follows:

(i) the forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than 6 metres, and, if the breadth of the vessel exceeds 6 metres, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than 12 metres;

(ii) when two masthead lights are carried the after one shall be at least 4.5 metres vertically higher than the forward one.

(b) The vertical separation of masthead lights of powerdriven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 metres from the stem when viewed from sea level.

(c) The masthcad light of a power-driven vessel of 12 metres but less than 20 metres in length shall be placed at a height above the gunwale of not less than 2.5 metres.

(d) A power-driven vessel of less than 12 metres in length may carry the uppermost light at a height of less than 2.5 metres above the gunwhale. When however a masthead light is carried in addition to sidelights and a sternlight, then such masthead light shall be carried at least 1 metre higher than the sidelights.

(c) One of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or push-

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ing another vessel shall be placed in the same position as the forward masthead light of a power-driven vessel.

(f) In all circumstances the masthcad light or lights shall be so placed as to be above and clear of all other lights and obstructions.

(g) The sidelights of a power-driven vessel shall be placed at a height above the hull not greater than three quarters of that of the forward masthead light. They shall not be so low as to be interfered with by deck lights.

(h) The sidelights, if in a combined lantern and when carried on a power-driven vessel less than 20 metres in length, shall be placed not less than 1 metre below the masthead light.

(i) When the Rules prescribe two or three lights to be carrier in a vertical line, they shall be spaced as follows:

(i) on a vessel of 20 metres in length or more such lights shall be spaced not less than 2 metres apart, and the lowest of these lights shall, except where a towing light is required, not be less than 4 metres above the hull;

(ii) on a vessel of less than 20 metres in length such lights shall be spaced not less than 1 metre apart and the lowest of these lights shall, except where a towing light is required, not be less than 2 metres above the gunwale;

(iii) when three lights are carried they shall be equally spaced.

(j) The lower of the two all-round lights prescribed for a fishing vessel when engaged in fishing shall be at a height above the sidelights not less than twice the distance between the two vertical lights.

(k) The forward anchor light, when two are carried, shall not be less than 4.5 metres above the after one. On a vessel of 50 metres or more in length this forward anchor light shall not be less than 6 metres above the hull.

3. Horizontal positioning and spacing of lights

(a) When two masthcad lights are prescribed for a power-driven vessel, the horizontal distance between them

shall not be less than one half of the length of the vessel but need not be more than 100 metres. The forward light shall be placed not more than one quarter of the length of the vessel from the stem.

(b) On a vessel of 20 metres or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.

 Details of location of direction-indicating lights for fishing vessels, dredgers and vessels engaged in underwater operations

(a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c) (ii) shall be placed at a horizontal distance of not less than 2 metres and not more than 6 metres away from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c) (i) and not lower than the sidelights.

(b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d) (i) and (ii), shall be placed at the maximum practical horizontal distance, but in no case less than 2 metres, from the lights or shapes prescribed in Rule 27(h) (i) and (ii). In no case shall the upper of these lights or shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b) (i) and (ii).

5. Screens for sidelights

The sidelights shall be fitted with inboard screens painted matt black, and meeting the requirements of Section 9 of this Annex. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.

6. Shapes

(a) Shapes shall be black and of the following sizes;

(i) a ball shall have a diameter of not less than 0.6 metre:

(ii) a cone shall have a base diameter of not less than 0.6 metre and a height equal to its diameter;

(iii) a cylinder shall have a diameter of at least 0.6 metre and a height of twice its diameter;

(iv) a diamond shape shall consist of two cones as defined in (ii) above having a common base.

(b) The vertical distance between shapes shall be at least 1.5 metre.

(c) In a vessel less than 20 metres in length shapes of lesser dimensions but commensurate with the size of the vessel, may be used and the distance apart may be correspondingly reduced.

7. Colour specification of lights

The chromaticity of all navigation lights shall conform to the following standards, which lie within the boundaries of the area of the diagram specified for each colour by the International Commission on Illumination (CIE).

The boundaries of the area for each colour are given by indicating the corner co-ordinates, which are as follows:

(i) (i) White

x 0.525 0.525 0.452 0.310 0.310 0.443 y 0.382 0.440 0.440 0.348 0.283 0.382

(ii) Green

- x 0.028 0.009 0.300 0.203
- y 0.385 0.723 0.511 0.356

- (iii) Red
 - x 0.680 0.660 0.735 0.721
 - y 0.320 0.320 0.265 0.259
- (iv) Yellow
 - x 0.612 0.618 0.575 0.575
 - y 0.382 0.382 0.425 0.406

8. Intensity of lights

(a) The minimum luminous intensity of lights shall be calculated by using the formula:

I=3.43×10⁶×T×D²×K^{-D}

Where I is luminous intensity in candelas under service conditions,

T is threshold factor 2×10^{-7} lux,

D is range of visibility (luminous range) of the light in nautical miles,

K is atmospheric transmissivity.

For prescribed lights the value of K shall be 0.8, corresponding to a meteorological visibility of approximately 13 nautical miles.

(b) A selection of figures derived from the formula is given in the following table:

Range	of	υi	sibility	(luminous	Luminous intensity of light in	
range miles)	of	light	in	nautical	candelas for K=0.8	

D	I
1	0, 9
2	4.3
3	12
4	27
5	52
6	94

Note: The maximum luminous intensity of navigation lights should be limited to avoid undue glare.

9. Horizontal Sectors

(a) (i) In the forward direction, sidelights as fitted on the vessel must show the minimum required intensities. The intensities must decrease to reach practical cut-off between 1 degree and 3 degrees outside the prescribed sectors.

(ii) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 percent up to the prescribed limits; it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed limits.

(b) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights, which need not be placed at an impracticable height above the hull.

10. Vertical Sectors

(a) The vertical sectors of electric lights, with the exception of lights on sailing vessels shall ensure that:

(i) At least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;

(ii) At least 60 percent of the required minimum intensity is maintained from 7.5 degrees above to 7.5 degrees below the horizontal. (b) In the case of sailing vessels the vertical sectors of electric lights shall ensure that:

(i) at least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;

(ii) at least 50 percent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.

(c) In the case of lights other than electric these specifications shall be met as closely as possible.

11. Intensity of non-electric lights

Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the Table given in Section 8 of this Annex.

12. Manoeuvring light

Notwithstanding the provisions of paragraph 2(f) of this Annex the manocuvring light described in Rule 34(b)shall be placed in the same fore and aft vertical plane as the masthead light or lights and, where practicable, at a minimum height of 2 metres vertically above the forward masthead light, provided that it shall be carried not less that 2 metres vertically above or below the after masthead light. On a vessel where only one masthead light is carried the manoeuvring light, if fitted, shall be carried where it can best be seen, not less than 2 metres vertically apart from the masthead light.

13. Approval

The construction of lanterns and shapes and the installation of lanterns on board the vessel shall be to the satisfaction of the appropriate authority of the State where the vessel is registered.

Comment: As mentioned in comments under Rule 21 at the beginning of "Lights and Shapes", technical details of lights and shapes construction have been relegated to an annex for use by the builder rather than the mariner. This annex constitutes material from various present rules together with technical details developed in working group sessions preliminary to the International Conference. The technical requirements laid down are well within the state of the art for navigational light manufacturers. In fact, there is a good deal of merit in providing specific limitations for manufacturers to aim at. at.

ANNEX II

ADDITIONAL SIGNALS FOR FISHING VESSELS FISHING IN CLOSE PROXIMITY

1. General

The lights mentioned herein shall, if exhibited in pursuance of Rule 26(d) be placed where they can best be seen. They shall be at least 0.9 metre apart but at a lower level than lights prescribed in Rule 26(b)(i) and (c)(i). The lights shall be visible all round the horizon at a distance of a least 1 mile but at a lesser distance than the lights prescribed by these Rules for fishing vessels.

2. Signals for trawlers

(a) Vessels, when engaged in trawling, whether using demersal or pelagic gear, may exhibit:

(i) when shooting their nets: two white lights in a vertical line;

(ii) when hauling their nets: one white light over one red light in a vertical line;

(iii) when the net has come fast upon an obstruction: two red lights in a vertical line.

(b) Each vessel engaged in pair trawling may exhibit:
(i) by night, a searchlight directed forward and in the direction of the other vessel of the pair;

(ii) when shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in 2(a) above.

3. Signals for purse seiners

Vessels engaged in fishing with purse seine gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear.

Comment: These are the additional signals for fishing vessels fishing in close proximity to one another which were mentioned earlier in discussion of Rule 26. By international treaty these signals are currently being used in the North Atlantic. Adoption here would extend them to the rest of the high seas.

ANNEX III

TECHNICAL DETAILS OF SOUND SIGNAL APPLIANCES

1. Whistles

(a) Frequencies and range of audibility

The fundamental frequency of the signal shall lie within the range 70-700 Hz.

The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the range 180-700 Hz (± 1 percent) and which provide the sound pressure levels specified in paragraph 1(c) below.

(b) Limits of fundamental frequencies

To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits:

(i) 70-200 Hz, for a vessel 200 metres or more in length;
 (ii) 130-350 Hz, for a vessel 75 metres but less than

200 metres in length; (iii) 250-700 Hz, for a vessel less than 75 metres in

length.

(c) Sound signal intensity and range of audibility

A whistle fitted in a vessel shall provide, in the direction of maximum intensity of the whistle and at a distance of of 1 metre from it, a sound pressure level in at least one $\frac{1}{3}$ octave band within the range of frequencies 180-700 Hz (± 1 percent) of not less than the appropriate figure given in the table below.

Length of vossel in metres	1/2-octave band level at 1 metre in dB referred to 2×10 ⁻¹ N/m ²	Audibility range in nautical miles
200 or more	- 143	2
20 but less than 75 Less than 20	130 120	1 0.5-

The range of audibility in the table above is for information and is approximately the range at which a whistle may be heard on its forward axis with 90 percent probability in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centred on 250 Hz and 63 dB in the octave band centred on 500 Hz).

In practice the range at which a whistle may be heard is extremely variable and depends critically on weather conditions; the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be much reduced.

(d) Directional properties

The sound pressure level of a directional whistle shall be not more than 4 dB below the sound pressure level on the axis at any direction in the horizontal plane within ± 45 degrees of the axis. The sound pressure level at any other direction in the horizontal plane shall be not more than 10 dB below the sound pressure level on the axis, so that the range in any direction will be at least half the range on the forward axis. The sound pressure level shall be measured in that $\frac{1}{3}$ -octave band which determines the audibility range.

(e) Positioning of whistles

When a directional whistle is to be used as the only whistle on a vessel, it shall be installed with its maximum intensity directed straight ahead.

A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 110 dB (A) and so far as practicable should not exceed 100 dB (A).

(f) Fitting of more than one whistle

If whistles are fitted at a distance apart of more than 100 metres, it shall be so arranged that they are not sounded simultaneously.

(g) Combined whistle systems

If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in paragraph 1(f) above is likely to have a zone of greatly reduced signal level, it is recommended that a combined whistle system be fitted so as to overcome this reduction. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle. The whistles of a combined system shall be located at a distance apart of not more than 100 metres and arranged to be sounded simultaneously. The frequency of any one whistle shall differ from those of the others by at least 10 Hz.

2. Bell or gong

(a) Intensity of signal

A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at 1 metre.

(b) Construction

Bells and gongs shall be made of corrosion-resistant materials and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of more than 20 metres in length, and shall be not less than 200 mm for vessels of 12 to 20 metres in length. Where practicable, a power-driven bell striker is recommended to ensure constant force but manual operation shall be possible. The mass of the striker shall be not less than 3 percent of the mass of the bell.

3. Approval

The construction of sound signal appliances, their performance and their installation on board the vessel shall be to the satisfaction of the appropriate authority of the State where the vessel is registered.

Comment: As with the lighting annex, this sound signal annex provides technical specifications which should be of significant benefit to whistle and bell manufacturers, ship designers and builders. If there is to be any significant difficulty with either the lighting specifications or the whistle signal specifications, it will probably be in the area of verifying the specifications once the equipment has been installed.

ABOUT THE AUTHORS

Captain Winford W. Barrow assumed the duties of Chief, Operations Division, Fifth Coast Guard District, Portsmouth, Va. on July 31, 1972 with, at times, additional duties as Acting Chief of Staff. Before assuming his present duties, Captain Barrow was Commander, Coast Guard Group, Baltimore.

Commander John M. Duke is presently the Chief, Merchant Marine Safety School at the Coast Guard Reserve Training Center, Yorktown, Va. He assumed those duties on July 5, 1971. Immediately prior to his present assignment, Commander Duke spent 4 years as Chief, Rules of the Road Branch at Coast Guard Headquarters where he worked with national and international groups on safety of navigation problems.

Both authors had a great deal of experience in the early preparations leading up to the new International Regulations for Preventing Collisions at Sea.





Captain Winford W. Barrow

Commander John M. Duke

ANNEX IV

DISTRESS SIGNALS

1. The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

(a) a gun or other explosive signal fired at intervals of about a minute;

(b) a continuous sounding with any fog-signalling apparatus;

(c) rockets or shells, throwing red stars fired one at a time at short intervals;

(d) a signal made by radiotelegraphy or by any other signalling method consisting of the group . . . _ _ . (SOS) in the Morse Code;

(e) a signal sent by radiotelephony consisting of the spoken word "Mayday"

(f) the International Code Signal of distress indicated by N.C.:

(g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;

(h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);

(i) a rocket parachute flare or a hand flare showing a red light;

 (j) a smoke signal giving off orange-coloured smoke;
 (k) slowly and repeatedly raising and lowering arms outstretched to each side;

(1) the radiotelegraph alarm signal;

(m) the radiotelephone alarm signal;

(n) signals transmitted by emergency position indicating radio beacons.

2. The use or exhibition of any of the foregoing signals, except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.

3. Attention is drawn to the relevant sections of the International Code of Signals, the Merchant Ship Scarch and Rescue Manual and the following signals:

(a) a piece of orange-coloured canvas with either a black square and circle or other appropriate symbol (for identification from the air);

(b) a dye marker. ,

Comment: These, of course, are the distress signals taken from existing Rule 31. Three new signals have been added: the emergency position beacon (1n) an orange color canvas with a black square and circle (3a) and a dye marker (3b).

Summary of Important Changes

1. Throughout the rules a great deal of emphasis has been placed on the use of radar in fair weather as well as foul. U.S. mariners were in favor of this emphasis by a margin of 6 to 1. By the continued use of the word shall in place of either should or may, it is clear that additional manning and/or automatic plotting and analyzation equipment will ultimately be involved. However, at the outset of the adoption of these rules we suspect the additional chores laid on by the numerous uses of the word shall will fall to the already overburdened master.

2. Traffic separation schemes usage will increase significantly. They will appear at the approaches to every major port in the world and will also appear at dangerous or congested areas of trade routes. This will be particularly true in the areas traveled by huge oil and gas carriers. Although these vessels will increase in size and number, hopefully traffic separation schemes in conjunction with the privileged status afforded such vessels by these rules will decrease their potential for casualty and the ensuing holocaust.

3. The narrow channel rule modification must be considered one of major significance because it introduces into the heretofore rigid rudder signals the concept of intent signals.

We believe future amendments to these whistle signals will bring them even closer toward the U.S. system of intent signals. Such signals would be particularly useful in traffic separations schemes where the opposing lanes are physically very close to one another.

4. Perhaps the single most significant rule change (Rule 17) is that of allowing the stand-on vessel to breakoff early. It is very difficult to predict the impact of this rule change. However, it is fair to say that a great many more stand-on vessels will break off early under this rule than under the existing rules. That alone could significantly reduce collisions; it also might cause a few. Under this new rule we believe the courts will hold the standon vessel responsible for breaking off early, only when it can be shown that the burdened vessel was in fact not taking action to avert collision.

5. Rule changes for conduct in fog, replacing the term moderate speed with the safe speed rule and significant emphasis on radar are all tied very closely together. The result will not necessarily be slower mariners in a fog but reliable prudence will improve. These will hopefully reduce the number of collisions in conditions of restricted visibility. When the courts are called upon to rule on the term "safe speed" they will no longer be tied to the concept of stopping within half the distance of the visibility. Fog collisions will no longer involve automatic condemnation for excessive speed. Each case should involve a court test of the factors that go into the determination of what is a safe speed for the particular circumstances.

6. Editorial and physical changes dealing with lights and shapes are a significant improvement. As mentioned earlier, we do believe certain vessels are, by the rules, required to have an overabundance of lights. An old Salt read this article for us and analyzed the lighting situation quite clearly in one sentence: "The more lights you see, the further away you better get".

7. Not to be overlooked-in fact what may prove to be the most beneficial improvement-is the magnificent editorial job the drafters have done on these rules. Anyone who has attempted to read all the way through the existing rules must admit that it is a difficult job at best and results in a great deal of confusion. These rules are indeed readable, and more than that, one can remember what he reads. To prove our point (if you have read all

of the rules as you wandered through this article) read down the following list of rule titles:

PART A-GENERAL RULE 1-Application RULE 2-Responsibility **RULE 3**—General definitions PART B-STEERING AND SAILING RULES SECTION I-CONDUCT OF VESSELS IN ANY CONDITION OF VISIBILITY RULE 4-Application RULE 5-Look-out RULE 6-Safe speed RULE 7-Risk of collision RULE 8-Action to avoid collision **RULE 9-Narrow channels** RULE 10-Traffic separation schemes SECTION 2-CONDUCT OF VESSELS IN SIGHT OF ONE ANOTHER. **RULE 11-Application** RULE 12-Sailing vessels RULE 13-Overtaking RULE 14-Head-on situation **RULE 15-Crossing situation** RULE 16-Action by "give-way" vessel RULE 17-Action by "stand-on" vessel RULE 18-Responsibilities between vessels SECTION 3-CONDUCT OF VESSELS IN RESTRICTED VISIBILITY RULE 19-Conduct of vessels in restricted visibility PART C-LIGHTS AND SHAPES **RULE 20—Application RULE 21-Definitions** RULE 22-Visibility of lights RULE 23-Power-driven vessels underway RULE 24-Towing and pushing RULE 25-Sailing vessels underway and vessels under oars RULE 26-Fishing vessels RULE 27-Vessels not under command or restricted in their ability to manoeuvre RULE 28-Vessels constrained by their draught RULE 29-Pilot vessels RULE 30-Anchored vessels and vessels aground **RULE 31—Seaplanes** PART D-SOUND AND LIGHT SIGNALS **RULE 32—Definitions** RULE 33-Equipment for sound signals RULE 34-Manoeuvring and warning signals

RULE 35—Sound signals in restricted visibility

RULE 36-Signals to attract attention

RULE 37-Distress signals

PART E-EXEMPTIONS

RULE 38—Exemptions

- ANNEX I POSITIONING AND TECHNI-CAL DETAILS OF LIGHTS AND SHAPES
- ANNEX II ADDITIONAL SIGNALS FOR FISHING VESSELS FISHING IN CLOSE PROXIMITY
- ANNEX III TECHNICAL DETAILS OF SOUND SIGNAL APPLIANCES

ANNEX IV DISTRESS SIGNALS

A quick look at any one of the titles should be enough to jog your memory as to the contents of the specific rule.

Adoption and Amendment Procedure

The rules presently in force (the International Regulation for Preventing Collision At Sea, 1960) were to come into force when agreed upon by 85 percent of world shipping tonnage. This took 5 years. The maritime nations want these rules to come into force sooner than that, so they have dropped this percentage to 75. However, they do not want them to come into force prior to January 1, 1976, which is an automatic 3-year delay.

The existing rules and their predecessors had no method for amendments. Any changes in the rules required an international conference to revise the rules. The members of this International Conference made provision for IMCO to call a new rules conference should it prove desirable and for any contracting nation to submit individual changes through IMCO. Admittedly, the process by which such a rule change would be approved and come into force is cumbersome and lengthy. However, consider this a plus because it will add necessary stability to the rules. A rule change may be effected roughly in the following manner:

A nation submits a rule change to IMCO where it will be studied by a subcommittee and subsequently sent with recommendations to the Maritime Safety Committee of IMCO. If that body adopts the change by a two-thirds majority it will be sent to all nations which use the International Rules for a study period of not less than 6 months. After that, the major body of IMCO (the Assembly), plus any maritime nation using the International Rules of the Road who so desires, vote on the change. If the change is adopted by a two-thirds majority it is again sent to all nations using the Rules for their individual acceptance. The date of coming-in-force is then established by the Assembly. Finally, if before that date as many as onethird of the nations who use the rules notify IMCO of their objection, the change will not be adopted. Even with this cumbersome machinery it must be remembered that this is the first time International Rules of the Road have been allowed to change short of International Conference. We suspect IMCO will be barraged with changes shortly after these Rules come into force. In fact, it would not he surprising to see amendments in the making before these rules come into force.

U.S. Local Rules

There are well over 200 U.S. Local Rules of the Road and supplementary regulations. For several years a great deal of work was done to consolidate these Rules and pattern them after the International Rules of the Road to significantly reduce the number of rules the mariner had to deal with. Also, one of the mandates the maritime group took upon itself in preparing for this conference was to devise a set of rules that would make it easy for the maritime nations to bring their local rules into conformance with the International Rules. We don't know whether or not the conference succeeded in this endeavor, but we do feel the new rules constitute a substantial improvement over the old ones. Regardless of the size of the undertaking, the task of local rule consolidation needs now to be reinstated.

lessons from casualties

Relief Valve Blows

This past summer, on two cargo vessels of the Colorado class, the escape piping from the superheater safety relief valves ruptured when the valve lifted while the valve was being "set and sealed." In one case the inspector and members of the ship's engineering department were standing next to the valve only moments before the valve lifted. The engineroom was quickly filled with steam and, fortunately, damage was limited to sheared lagging on the boiler casing. As the inspector stated, "Personnel injury was only averted by providence's good timing."

On these two vessels low pressure flexible metal hose was utilized to provide for thermal expansion (46 CFR 56.50-25(b)) and to change the direction of the escape piping. It was this metal hose that failed. Present regulations do not cover the problems of discharge reactive forces and pressure design. Regulation changes have been proposed to solve these problems.

For the present, safety and relief valve escape piping, particularly the expansion joints and flexible pipe (hose) sections, should be inspected to ascertain their physical condition and to be sure that they are not subject to undue stress caused by improper installation. When these components require renewal they should be replaced with units designed for the rapidly fluctuating temperature and pressure that will be encountered; the manufacturer may be consulted to determine the units' suitability. When installed, new units should not be used to replace elbows

or bends nor to support the escape piping in any manner.

Tow Job

Don't be half safe, they say. Or in other words, when thinking safety try to think it all the way through. The following is a true story, honest. A local resident was working on his house roof, and being a safety conscious type of sorts, tied a safety line to his waist after running it over the roof top and anchoring it to the handle of his car door. While he was working away, his wife decided she needed some items at the local market, so * * *. To put it bluntly, he was keel hauled in reverse and broke both legs on his crash landing before his wife found out she had something in tow. As the old slogan goes, "before you louse it up, THIMK!"

COAST GUARD RULEMAKING

(Status as of 1 January 1974)

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
1972 PUBLIC HEARING							
Tailshaft inspection and drawing (67–71, 4–71) Definition of international voyage (12–70) Portable foam firefighting equipment—tank vessels (17– 71)	3-1-72 3-1-72 3-1-72	3-27-72 3-27-72 3-27-72	4-3-72 4-3-72 4-3-72	× 		10-24-73	1–1–74
ANCHORAGE REGULATIONS							
Casco Bay, Maine (CGD 72-103). Henderson Harbor, N.Y. St. John's River, Fla. (CGFR 71-162). San Juan Harbor, P.R. (CGFR 72-12). Willington River, Ga. (CGFR 71-153). San Diego Harbor (CGD 72-228). Juan De Fuca, Wash. (CGD 72-233). Chester River, Md. (CGD 73-10). Milwaukee Harbor, WI (CGD 73-48). Barbers Point, Oahu, HI (CGD 73-48). Barbers Point, Oahu, HI (CGD 73-59). Sodus Bay, NY (CGD 73-126). Potts Harbor, ME (CGD 73-124). Puget Sound Area, WA (CGD 75-180). North East, MD (CGD 73-189). Delaware Bay and R. (CGD 73-190).	$\begin{array}{c} 6-16-72\\ 6-28-72\\ 12-22-71\\ 2-1-72\\ 11-25-71\\ 12-5-72\\ 12-5-72\\ 1-19-73\\ 3-30-73\\ 3-30-73\\ 4-27-73\\ 6-19-73\\ 6-19-73\\ 8-24-73\\ 11-29-73\\ 12-28-73\\ \end{array}$		$\begin{array}{c} 7-19-72\\ 8-1-72\\ 1-31-72\\ 3-4-72\\ 12-27-71\\ 1-8-73\\ 1-9-73\\ 2-27-73\\ 4-16-73\\ 4-20-73\\ 5-29-73\\ 5-20-73\\ 7-20-73\\ 9-20-73\\ 12-31-73\\ 2-15-73\\ \end{array}$	X XXXX XXXXX XXXX XXXX		12-5-73 12-5-73 12-10-73	1-7-74 1-7-74
BOATING SAFETY (GENERAL)							
Termination of unique vessels (CGD 73-40) Hazardous bar areas (CGD 73-41) BRIDGE REGULATIONS	3–14–73 3–14–73	5-8-73 4-17 & 19-73	5–14–73 5–1–73	××			
Nansemond R., Va. (CGD 72-244). John Day R., Blind Slough, Clatskanie R., Oregon (CGD 72-231). Nanticoke, Del. (CGFR 71-142). Ogden Slip, Chicago, Ill. (CGFR 72-16). Sacramento River, Cal. (CGFR 71-165). Clear Creek, Tex. (CGD 72-165P). Pascagoula R. MS (CGD 73-140).	11-11-72 11-28-72 11-24-71 2-2-72 12-29-71 8-26-72		12-15-72 1-2-73 12-24-71 3-7-72 2-7-72 10-3-72	× ××××		12-6-73	12-1-73 through
Sacramento R. et. al. CA (CGD 73-142). Lechmere Canal MA (CGD 73-163). Westchester Ck. NY (CGD 73-166). Cheesequake Ck. NJ (CGD 73-162). Green R. KY (CGD 73-171). Pompano Beach, Fla. (CGD 72-158P). St. Lucie River, Fla. (CGD 72-168P). West Palm Beach, Fla. (CGD 72-168P). West Palm Beach, Fla. (CGD 72-167P). AIWW, Mile 342, Fla.; Drawbridge Operations (CGD 72-190P). Barnegat Bay, N.J. (CGD 72-211). Menominee River, W1 (CGD 73-12).	7-20-73 8-10-73 8-10-73 8-21-73 8-22-72 8-26-72 8-26-72 9-30-72 10-31-72 1-26-73	· · · · · · · · · · · · · · · · · · ·	8-21-73 9-11-73 9-11-73 9-25-73 9-25-73 9-26-72 10-3-72 10-3-72 11-1-72 12-5-72 3-6-73	XXXXXXXX XXX			4-15-74
Spa Creek, MD (CGD 73-13) Long Island Inland Waterway (CGD 73-23) Shaws Cove, CT (CGD 73-72) Scuppernong R., NC (CGD 73-111) Paburan R. NL (CGD 73-166)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		3-6-73 3-30-73 5-10-73 7-3-73 10-16-73	XXX XX			

Coast Guard Rulemaking-Continued

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
Alabama R., AL (CGD 73–195). Ashepoo R., SC (CGD 73–198). Red River LA & AR (CGD 73–197). Corte Madera CK, CA (CGD 73–199). Gulf Intracoastal Waterway, FL (CGD 73–204).	9-11-73 9-11-73 9-11-73 9-11-73 9-11-73		10–16–73 10–16–75 10–16–73 10–16–73	××××	· · · · · · · · · · · · · · · · · · ·	9–13–73	8-15-73 through 3-1-74
Genesee R., NY (CGD 73-203). Navigable Waters in LA (CGD 73-214) Puyallup R., WA (CGD 73-215). Stony Ck., MD (CGD 73-242). Lake Washington Ship Canal, WA (CGD 73-255)	9-13-73 9-27-73 10-3-73 10-12-73 11-13-73	·····	10-16-73 10-30-73 11-6-73 11-20-73 12-18-73	XXXXX			· · · · · · · · · · · · · · · · · · ·
HAZARDOUS MATERIALS							
Dichlorobutene, Corrected, F.R. 9-20-72, Hazardous Cargoes (CGD 72-162PH) Certification of Cargo Containers for Transport under	8-30-72	10-24-72	10-31-72 12-19-72	×××			
Miscellaneous Dangerous Cargoes (CGD 72-182)	11-11-72	12-12-72	12-19-72	×			
137). Dangerous Cargoes, miscellaneous amendments (CGD 73-173).	8-31-73 9-5-73	9-25-73 9-25-73	10-5-73 10-5-73	×			
MARINE ENVIRONMENT AND SYSTEMS					1		
Oil pollution prevention (CGFR 71–160, 161) Marine Sanitation Devices (CGD 73–83)	12-24-71 Adv. Notice	2-15-72	4-21-72	×		. 12-21-72	7-1-741
Vessel traffic system, Puget Sound (CGD 73-158) Security Zone, New London CT (CGD 73-182)	6-18-73 8-6-73 8-23-73 corrected 9-4-73	8-30-73	8–15–73 9–17–73 9–28–73	XXX			
Chesapeake Bay entrance (CGD 73-152)	12-18-73	2-11-74	1-23-74			12-5-73	12-9-73
101). Navigable waters as state waters for private aids to navi- gation (CGD 72-154)	·····					. 12-5-73	12-9-73
MERCHANT MARINE SAFETY (GENERAL)		1.00	1.000				
Compressed Gas Cylinders (CGD 72–115PH) Oceanographic vessels, fire main systems (CGFR 72–20) Water lights, floating electric (CGFR 72–48)	B-31-72 2-4-72 3-9-72	9-28-72 4-18-72	10-2-79 3-19-79 4-24-79				
Great Lakes Maritime Academy, List as a Nautical School-Ship (GGD 72-92P)	8-9-72		. 9-15-7:	2 ×			
Ship's Maneuvering Characteristics Data (CGD 72- 134PH)	8-22-72 Supp. Notice	9-28-72	10-13-7	2 ×			
Unmanned Barges; hull construction (CGD 72-130) Construction requirements for tank ships (CGD 72-245)	7-20-73 10-31-72 Adv. Notice	12-19-72	8-31-7 12-29-7	3 × 2 ×			
	1-26-73 Supp. Notice		5-10-7				
Emergency Position Indicating Radio Beacons (CGD 73-24)	3-5-7	3 4-18-7	3 4-30-7	3)	دا		

¹ Various effective dates precede that indicated. See Federal Registers of 12-21-72 and 8-24-73.

Coast Guard Rulemaking—Continued

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
Firemen's outfits on manned tank barges (CGD 73-11)	4-26-73	On	5-28-73	×			
Dry chemical fire extinguisher requirements (CGD 73-73). Great Lakes pilot rules (CGD 73-100). Lifeboat winches for merchant vessels (CGD 73-103) Lifesaving equipment specification (CGD 73-130) Inflatable liferafts (CGD 73-160). Lifeboats for merchant vessels (CGD 73-116). Radar observer licensing (CGD 73-238). Pressure vessels (CGD 73-133). Explosion-proof flashlights: change in approval proce- dure for (CGD 73-247). Portable tanks (CGD 73-172).	6-8-73 8-1-73 8-21-73 8-26-73 9-27-73 10-3-73 10-12-73 10-12-73 10-12-73	1–15–74	7-10-73 9-3-73 9-28-73 9-28-73 10-31-73 11-2-73 11-30-73 11-16-73 11-16-73	******		12-5-73	12-9-73
Marine engineering amendments (CGD 73-248)	12-11-73	New Orleans	1-14-74				

Note: This table which will be continued in future issues of the Proceedings is designed to provide the maritime public with better information on the status of changes to the Code of Federal Regulations made under authority granted the Coast Guard. Only those proposals which have appeared in the Federal Register as Notices of Proposed Rulemaking, and as rules will be recorded. Proposed changes which have not been placed formally before the public will not be included.

AMENDMENTS TO REGULATIONS

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGD 73-247R]

SUBCHAPTER H-PASSENGER VESSELS

Part 77—Vessel Control and Miscellaneous Systems and Equipment

SUBCHAPTER I-CARGO AND MISCELLANEOUS VESSELS

Part 96—Vessel Control and Miscellaneous Systems and Equipment

SUBCHAPTER U-OCEANOGRAPHIC VESSELS

Part 195—Vessel Control and Miscellaneous Systems and Equipment

Change in Approval Procedure for Explosion-Proof Flashlights

The purpose of the amendments in this document is to reflect in §§ 77.35–5(c), 96.35–5(c), and 195.35–5(c) of Title 46, Code of Federal Regulations the current specifications for explosion-proof flashlights.

Explosion-proof flashlights, required as equipment of firemen on passenger, cargo and miscellaneous, and oceanographic vessels in §§ 77.35-5(c), 96.35-5(c), and 195.35-5(c), must meet the specifications contained in Subpart 161.008 of Title 46, Code of Federal Regulations, and be Coast Guard approved. This requirement is misleading because it fails to reflect the altered specification contained in Subpart 161.008.

Subpart 161.008 was established in the January 11, 1950 issue of the Federal Register (15 FR 128). It contained specifications for Type I (watertight), Type II (explosionproof), Size no. 2 (two-cell) and Size no. 3 (three-cell) flashlights, Type II flashlights were required to be explosion-proof and bear the label of Underwriters' Laboratories, Inc. as suitable for use in Class I, Group D, hazardous locations in order to be approved by the Goast Guard.

In the December 30, 1970 issue of the Federal Register (35 FR 19966), the specification for electric hand flashlights for merchant vessels was amended to apply only to watertight flashlights, (formerly "Type I") thereby eliminating the examination and approval of explosion-proof flashlights by the Coast Guard. However, the requirements for explosion-proof flashlights contained in \$\$ 77.35–5 (c), 96.35–5(c), and 195.35–5(c) were never amended to reflect this change in the approval procedure.

This document corrects that oversight by amending §§ 77.35-5, 96.35-5, and 195.35-5 to require that a 3 cell explosion-proof flashlight be listed by Underwriters' Laboratories, Inc. and bear its label, and by removing the requirement that the flashlight must also be approved by the Coast Guard.

Since the amendments in this document are merely editorial changes, notice and public procedure thereon are unnecessary and they may be made effective in less than 30 days.

(The complete text of these amendments was published in the Federal Register of December 5, 1974.)

MERCHANT MARINE SAFETY PUBLICATIONS

The following publications of marine safety rules and regulations may be obtained from the nearest marine inspection office of the U.S. Coast Guard. Because changes to the rules and regulations are made from time to time, these publications, between revisions, must be kept current by the individual consulting the latest applicable Federal Register. (Official changes to all Federal rules and regulations are published in the Federal Register, printed daily except Saturday, Sunday, and holidays.) The date of each Coast Guard publication in the table below is indicated in parentheses following its title. The dates of the Federal Registers affecting each publication are noted after the date of each edition.

The Federal Register will be furnished by mail to subscribers, free of postage, for \$5.00 per month or \$45 per year, payable in advance. The charge for individual copies is 75 cents for each issue. or 75 cents for each group of pages as actually bound. Remit check or money order, made payable to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Regulations for Dangerous Cargoes, 46 CFR 146 and 147 (Subchapter N), dated October 1, 1972 are now available from the Superintendent of Documents price: \$5.75

CG No.

TITLE OF PUBLICATION

- 101 Specimen Examination for Merchant Marine Deck Officers (7-1-63).
- 101-1 Specimen Examinations for Merchant Marine Deck Officers (2d and 3d mate) (10-1-73).
- 108 Rules and Regulations for Military Explosives and Hazardous Munitions (4-1-72). F.R. 7-21-72, 12-1-72.
- Marine Engineering Regulations (6-1-73) F.R. 6-29-73. 115
- 123 Rules and Regulations for Tank Vessels (1-1-73). F.R. 8-24-73, 10-3-73, 10-24-73,
- 129 Proceedings of the Marine Safety Council (Monthly).
- Rules of the Road—International—Inland (8-1-72). F.R. 9-12-72. 169
- 172 Rules of the Road-Great Lakes (7-1-72). F.R. 10-6-72, 11-4-72, 1-16-73, 1-29-73, 5-8-73.
- 174 A Manual for the Safe Handling of Inflammable and Combustible Liquids (3-2-64).
- Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department (3-1-73). 175
- 176 Load Line Regulations (2-1-71) F.R. 10-1-71, 5-10-73.
- 182 Specimen Examinations for Marchant Marine Engineer Licenses (7-1-63).
- 182 1Specimen Examinations for Merchant Marine Engineer Licenses (2d and 3d Assistant) (10-1-73).
- 184 Rules of the Road-Western Rivers (8-1-72). F.R. 9-12-72, 5-8-73.
- 190 Equipment List (8-1-72). F.R. 8-9-72, 8-11-72, 8-21-72, 9-14-72, 10-19-72, 11-8-72, 12-5-72, 1-15-73, 2-6-73, 2-26-73, 3-27-73, 4-3-73, 4-26-73, 6-1-73, 8-1-73, 10-5-73, 11-26-73.
- Rules and Regulations for Licensing and Certification of Merchant Marine Personnel (6–1–72). F.R. 12–21–72, 191 3-2-73, 3-5-73, 5-8-73, 5-11-73, 5-24-73, 8-24-73, 10-24-73. 200
- Marine Investigation Regulations and Suspension and Revocation Proceedings (5-1-67). F.R. 3-30-68, 4-30-70, 10-20-70, 7-18-72, 4-24-73, 11-26-73, 12-17-73. 227
- Laws Governing Marine Inspection (3-1-65).
- Security of Vessels and Waterfront Facilities (3-1-72). F.R. 5-31-72, 11-3-72, 7-8-72, 1-5-73. 239
- Rules and Regulations for Passenger Vessels (5-1-69). F.R. 10-29-69, 2-25-70, 4-30-70, 6-17-70, 10-31-70, 256 12-30-70, 3-9-72, 7-18-72, 10-4-72, 10-14-72, 12-21-72, 4-10-73, 8-1-73, 10-24-73, 12-5-73.
- Rules and Regulations for Cargo and Miscellaneous Vessels (4-3-73). F.R. 6-28-73, 6-29-73, 8-1-73, 10-24-73. 257
- 258 Rules and Regulations for Uninspected Vessels (5–1–70). F.R. 1–8–73, 3–28–73.
- Electrical Engineering Regulations (6-1-71). F.R. 3-8-72, 3-9-72, 8-16-72, 8-24-73, 11-29-73. 259
- 266 Rules and Regulations for Bulk Grain Cargoes (5-1-68). F.R. 12-4-69.
- Rules and Regulations for Manning of Vessels (10-1-71). F.R. 1-13-72, 3-2-73. 268
- Miscellaneous Electrical Equipment List (7-2-73). 293
- Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (7-1-72), F.R. 7-8-72. 320
- Rules and Regulations for Small Passenger Vessels (Under 100 Gross Tons) (12-1-71), F.R. 3-8-72, 3-25-72, 6-24-72, 323 7-18-72, 9-13-72, 12-8-72, 12-21-72, 1-8-73, 3-5-73, 6-29-73.
- Fire Fighting Manual for Tank Vessels (7-1-68). 329
- 439 Bridge-to-Bridge Radiotelephone Communications (12-1-72).

CHANGES PUBLISHED DURING DECEMBER 1973

The following have been modified by Federal Registers:

CG-200, Federal Register of December 17, 1973.

CG-256 and CG-257, Federal Register of December 5, 1973.

