

Resolution MSC.74(69), Annex 3, Recommendation on Performance Standards for a Universal Shipborne Automatic Identification System (AIS), adopted May 12, 1998	164.46	(4) RTCM Paper 191-93/SC112-X, RTCM Recommended Standards for Maritime Radar Equipment Installed on Ships of 300 Tons Gross Tonnage and Upwards, Version 1.2, December 20, 1993	164.72
SN/Circ.227, Guidelines for the Installation of a Shipborne Automatic Identification System (AIS), dated January 6, 2003	164.46	[CGD 91-203, 58 FR 27632, May 10, 1993, as amended by CGD 83-043, 60 FR 24771, May 10, 1995; CGD 93-022, 60 FR 51734, Oct. 3, 1995; CGD 96-026, 61 FR 33669, June 28, 1996; CGD 94-020, 61 FR 35072, July 3, 1996; USCG-1999-5151, 64 FR 67176, Dec. 1, 1999; USCG-2002-12471, 67 FR 41333, June 18, 2002; USCG-2003-14757, 68 FR 39367, July 1, 2003; 68 FR 60569, Oct. 22, 2003; 69 FR 18803, Apr. 9, 2004; USCG-2004-18057, 69 FR 34926, June 23, 2004; USCG-2008-0179, 73 FR 35016, June 19, 2008]	
SOLAS, International Convention for Safety of Life at Sea, 1974, and 1988 Protocol relating thereto, 2000 Amendments, effective January and July 2002, (SOLAS 2000 Amendments)	164.46		
Conference resolution 1, Adoption of amendments to the Annex to the International Convention for the Safety of Life at Sea, 1974, and amendments to Chapter V of SOLAS 1974, adopted December 12, 2002	164.46		
<i>International Telecommunication Union Radiocommunication Bureau (ITU-R)</i> , Place de Nations CH-1211 Geneva 20 Switzerland			
(1) ITU-R Recommendation M.821, Optional Expansion of the Digital Selective-Calling System for Use in the Maritime Mobile Service, 1992	164.43		
(2) ITU-R Recommendation M.825, Characteristics of a Transponder System Using Digital Selective-Calling Techniques for Use with Vessel Traffic Services and Ship-to-Ship Identification, 1992	164.43		
ITU-R Recommendation M.1371-1, Technical characteristics for a universal shipborne automatic identification system using time division multiple access in the VHF maritime mobile band, 1998-2001	164.46		
<i>Radio Technical Commission for Maritime Services</i> , 655 Fifteenth Street, NW., Suite 300, Washington, DC 20005			
(1) RTCM Paper 12-78/DO-100, Minimum Performance Standards, Loran C Receiving Equipment, 1977	164.41		
(2) RTCM Paper 194-93/SC104-STD, RTCM Recommended Standards for Differential NAVSTAR GPS Service, Version 2.1, 1994	164.43		
(3) RTCM Paper 71-95/SC112-STD, RTCM Recommended Standards for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, Version 1.1, October 10, 1995	164.72		
		§ 164.11 Navigation under way: General.	
		The owner, master, or person in charge of each vessel underway shall ensure that:	
		(a) The wheelhouse is constantly manned by persons who:	
		(1) Direct and control the movement of the vessel; and	
		(2) Fix the vessel's position;	
		(b) Each person performing a duty described in paragraph (a) of this section is competent to perform that duty;	
		(c) The position of the vessel at each fix is plotted on a chart of the area and the person directing the movement of the vessel is informed of the vessel's position;	
		(d) Electronic and other navigational equipment, external fixed aids to navigation, geographic reference points, and hydrographic contours are used when fixing the vessel's position;	
		(e) Buoys alone are not used to fix the vessel's position;	
		NOTE: Buoys are aids to navigation placed in approximate positions to alert the mariner to hazards to navigation or to indicate the orientation of a channel. Buoys may not maintain an exact position because strong or varying currents, heavy seas, ice, and collisions with vessels can move or sink them or set them adrift. Although buoys may corroborate a position fixed by other means, buoys cannot be used to fix a position: however, if no other aids are available, buoys alone may be used to establish an estimated position.	
		(f) The danger of each closing visual or each closing radar contact is evaluated and the person directing the movement of the vessel knows the evaluation;	

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(g) Rudder orders are executed as given;

(h) Engine speed and direction orders are executed as given;

(i) Magnetic variation and deviation and gyrocompass errors are known and correctly applied by the person directing the movement of the vessel;

(j) A person whom he has determined is competent to steer the vessel is in the wheelhouse at all times;¹

(k) If a pilot other than a member of the vessel's crew is employed, the pilot is informed of the draft, maneuvering characteristics, and peculiarities of the vessel and of any abnormal circumstances on the vessel that may affect its safe navigation.

(l) Current velocity and direction for the area to be transited are known by the person directing the movement of the vessel;

(m) Predicted set and drift are known by the person directing movement of the vessel;

(n) Tidal state for the area to be transited is known by the person directing movement of the vessel;

(o) The vessel's anchors are ready for letting go;

(p) The person directing the movement of the vessel sets the vessel's speed with consideration for:

(1) The prevailing visibility and weather conditions;

(2) The proximity of the vessel to fixed shore and marine structures;

(3) The tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance;

(4) The comparative proportions of the vessel and the channel;

(5) The density of marine traffic;

(6) The damage that might be caused by the vessel's wake;

(7) The strength and direction of the current; and

(8) Any local vessel speed limit;

(q) The tests required by §164.25 are made and recorded in the vessel's log; and

(r) The equipment required by this part is maintained in operable condition.

(s) Upon entering U.S. waters, the steering wheel or lever on the navigating bridge is operated to determine if the steering equipment is operating properly under manual control, unless the vessel has been steered under manual control from the navigating bridge within the preceding 2 hours, except when operating on the Great Lakes and their connecting and tributary waters.

(t) At least two of the steering-gear power units on the vessel are in operation when such units are capable of simultaneous operation, except when the vessel is sailing on the Great Lakes and their connecting and tributary waters, and except as required by paragraph (u) of this section.

(u) On each passenger vessel meeting the requirements of the International Convention for the Safety of Life at Sea, 1960 (SOLAS 60) and on each cargo vessel meeting the requirements of SOLAS 74 as amended in 1981, the number of steering-gear power units necessary to move the rudder from 35° on either side to 30° on the other in not more than 28 seconds must be in simultaneous operation.

[CGD 74-77, 42 FR 5956, Jan. 31, 1977, as amended by CGD 83-004, 49 FR 43466, Oct. 29, 1984; CGD 91-203, 58 FR 27633, May 10, 1993; CGD 83-043, 60 FR 24771, May 10, 1995]

§ 164.13 Navigation underway: tankers.

(a) As used in this section, "tanker" means a self-propelled tank vessel, including integrated tug barge combinations, constructed or adapted primarily to carry oil or hazardous material in bulk in the cargo spaces and inspected and certificated as a tanker.

(b) Each tanker must have an engineering watch capable of monitoring the propulsion system, communicating with the bridge, and implementing manual control measures immediately when necessary. The watch must be physically present in the machinery spaces or in the main control space and must consist of at least a licensed engineer.

(c) Each tanker must navigate with at least two licensed deck officers on watch on the bridge, one of whom may be a pilot. In waters where a pilot is required, the second officer, must be an individual licensed and assigned to the vessel as master, mate, or officer in

¹See also 46 U.S.C. 8702(d), which requires an able seaman at the wheel on U.S. vessels of 100 gross tons or more in narrow or crowded waters during low visibility.