part from service either as recommended by the manufacturer or a class society authorized in §157.04 of this chapter or in accordance with a replacement schedule developed by the owner, master, or operator that accounts for at least the—

(A) Nautical miles on, or time in service of, the towline;

(B) Operating conditions experienced by the towline;

(C) History of loading of the towline;

(D) Surface condition, including corrosion and discoloration, of the towline;

(E) Amount of visible damage to the towline;

(F) Amount of material deterioration indicated by measurements of diameter and, if applicable, measurements of lay extension of the towline; and

(G) Point at which a tensile test proves the minimum breaking strength of the towline inadequate by the standards of paragraph (a)(1) of this section, if necessary; and

(v) Keeping on board the towing vessel or in company files of a record of the material condition of the towline when inspected under paragraphs (a)(3)(iii) and (iv) of this section. Once this record lapses for three months or more, except when a vessel is laid up or out of service or has not deployed its towline, the owner, master, or operator shall retest the towline or remove it from service.

(b) *Terminal gear.* The owner, master, or operator of each vessel towing astern shall ensure that the gear used to control, protect, and connect each towline meets the following criteria:

(1) The material and size of the terminal gear are appropriate for the strength and anticipated loading of the towline and for the environment;

(2) Each connection is secured by at least one nut with at least one cotter pin or other means of preventing its failure;

(3) The lead of the towline is appropriate to prevent sharp bends in the towline from fairlead blocks, chocks, or tackle;

(4) There is provided a method, whether mechanical or non-mechanical, that does not endanger operating personnel but that easily releases the towline;

(5) The towline is protected from abrasion or chafing by chafing gear, lagging, or other means;

(6) Except on board a vessel towing in ice on Western Rivers or one using a towline of synthetic or natural fiber, there is fitted a winch that evenly spools and tightly winds the towline; and

(7) If a winch is fitted, there is attached to the main drum a brake that has holding power appropriate for the horsepower or bollard pull of the vessel and can be operated without power to the winch.

[CGD 94–020, 61 FR 35074, July 3, 1996, as amended by USCG–1999–5151, 64 FR 67176, Dec. 1, 1999]

§164.76 Towline and terminal gear for towing alongside and pushing ahead.

The owner, master, or operator of each vessel towing alongside or pushing ahead shall ensure that the face wires, spring lines, and push gear used—

(a) Are appropriate for the vessel's horsepower;

(b) Are appropriate for the arrangement of the tow;

(c) Are frequently inspected; and

(d) Remain serviceable.

[CGD 94–020, 61 FR 35075, July 3, 1996]

§164.78 Navigation under way: Towing vessels.

(a) The owner, master, or operator of each vessel towing shall ensure that each person directing and controlling the movement of the vessel—

(1) Understands the arrangement of the tow and the effects of maneuvering on the vessel towing and on the vessel, barge, or object being towed;

(2) Can fix the position of the vessel using installed navigational equipment, aids to navigation, geographic reference-points, and hydrographic contours;

(3) Does not fix the position of the vessel using buoys alone (Buoys are aids to navigation placed in approximate positions either to alert mariners to hazards to navigation or to indicate the orientation of a channel. They may not maintain exact charted positions, because strong or varying currents,