

**§ 157.460**

**33 CFR Ch. I (7-1-08 Edition)**

(b) Prior to entering the port or place of destination and prior to getting underway, the master of a tankship that is not fitted with the double bottom that covers the entire cargo tank length shall plan the ship's passage using guidance issued under paragraph (a) of this section and estimate the anticipated under-keel clearance. The tankship master and the pilot shall discuss the ship's planned transit including the anticipated under-keel clearance. An entry must be made in the tankship's official log or in other on-board documentation reflecting discussion of the ship's anticipated passage.

(c) The owner or operator of a tank barge, that is not fitted with a double bottom that covers the entire cargo tank length, shall not permit the barge to be towed unless the primary towing vessel master or operator has been provided with written under-keel clearance guidance that includes—

(1) Factors to consider when calculating the tank barge's deepest navigational draft;

(2) Factors to consider when calculating the anticipated controlling depth;

(3) Consideration of weather or environmental conditions; and

(4) Conditions which mandate when the tank barge owner or operator shall be contacted prior to port entry or getting underway; if no such conditions exist, the guidance must contain a statement to that effect.

[CGD 91-045, 62 FR 49608, Sept. 23, 1997]

**§ 157.460 Additional operational requirements for tank barges.**

(a) *Emergency steering capability.* The owner or operator of each tank barge shall not permit the barge to be towed unless, by November 27, 1997, the primary towing vessel has—

(1) A steering gear system with a main power unit, an alternative power unit, and two remote steering gear control systems, except that separate steering wheels or steering levers are not required. The steering gear control systems must be arranged so that if the system in operation fails, the other system can be brought into immediate operation from a position on the navigating bridge; or

(2) Twin screw propulsion with separate control systems for each propeller.

(b) *Fendering system.* An owner or operator of a tank barge shall not permit the barge to be towed unless the primary towing vessel and any fleeting or assist towing vessels have a fendering system that is of substantial size and composition to prevent metal to metal contact between the towing vessel and the barge during maneuvering operations.

[CGD 91-045, 61 FR 39790, July 30, 1996; 61 FR 41685, Aug. 9, 1996]

**Subpart H—Interim Measures for Certain Tank Vessels Without Double Hulls Carrying Animal Fat or Vegetable Oil**

SOURCE: CGD 91-045, 61 FR 39791, July 30, 1996, unless otherwise noted.

**§ 157.500 Purpose and applicability.**

(a) The purpose of this subpart is to establish mandatory safety and operational requirements to reduce environmental damage resulting from the discharge of animal fat or vegetable oil.

(b) This subpart applies to each tank vessel specified in §157.01 of this part that—

(1) Is 5,000 gross tons or more;

(2) Carries animal fat or vegetable oil in bulk as cargo or cargo residue; and

(3) Is not equipped with a double hull meeting §157.10d of this part, or an equivalent to the requirements of §157.10d, but required to be equipped with a double hull at a date set forth in 46 U.S.C. 3703a (b)(3) and (c)(3).

**§ 157.510 Operational measures.**

An owner or operator of a tank vessel that carries animal fat or vegetable oil in bulk as cargo or cargo residue shall comply with the requirements in all sections of subpart G of this part.

**Subpart I—Interim Measures for Certain Tank Vessels Without Double Hulls Carrying Other Non-Petroleum Oil**

SOURCE: CGD 91-045, 61 FR 39791, July 30, 1996, unless otherwise noted.

**§ 157.600 Purpose and applicability.**

(a) The purpose of this subpart is to establish mandatory safety and operational requirements to reduce environmental damage resulting from the discharge of other non-petroleum oil.

(b) This subpart applies to each tank vessel specified in §157.01 of this part that—

- (1) Is 5,000 gross tons or more;
- (2) Carries other non-petroleum oil in bulk as cargo or cargo residue; and
- (3) Is not equipped with a double hull meeting §157.10d of this part, or an equivalent to the requirements of §157.10d, but required to be equipped with a double hull at a date set forth in 46 U.S.C. 3703a (b)(3) and (c)(3).

**§ 157.610 Operational measures.**

An owner or operator of a tank vessel that carries other non-petroleum oil in bulk as cargo or cargo residue shall comply with the requirements in all sections of subpart G of this part.

APPENDIX A TO PART 157—DAMAGE ASSUMPTIONS, HYPOTHETICAL OUTFLOWS, AND CARGO TANK SIZE AND ARRANGEMENTS

1. *Source.* The procedures for the damage assumption calculations contained in this Appendix conform to Regulations 24, 25, and 26 of Annex I of the International Convention for the Prevention of the Pollution from Ships, 1973, done at London, November 2, 1973.

2. *Assumptions.* For the purpose of calculating hypothetical outflow from tank vessels, three dimensions of the extent of damage of a parallelepiped on the side and bottom of the vessel are assumed.

(a) For side damage, the conditions are as follows:

Damage	Conditions
(1) Longitudinal extent ( $l_c$ ) .....	$\frac{1}{3} L^{2/3}$ or 14.5 m, whichever is less.
(2) Transverse extent ( $t_c$ ) (inboard from the vessel's side at right angles to the centerline at the level corresponding to the assigned summer freeboard) .....	$B$ —or 11.5 m, whichever is 5 less.
(3) Vertical extent ( $v_c$ ) .....	From the base line upwards without limit.

(b) For bottom damage, two conditions to be applied individually to the stated portions of the vessel, as follows:

Damage	Conditions	
	For 0.3L from the forward perpendicular of ship	Any other part of ship
(1) Longitudinal extent ( $l_c$ ) .....	$L/10$ .....	$L/10$ or 5 meters, whichever is less.
(2) Transverse extent ( $t_c$ ) .....	$B/6$ or 10 meters, whichever is less but not less than 5 meters.	5 meters.
(3) Vertical extent from the base line ( $v_c$ ) .....	$B/15$ or 6 meters, whichever is less .....	$B/15$ or 6 meters, whichever is less.

3. *Hypothetical Outflow of Oil.* (a) The hypothetical outflow of oil in the case of side damage ( $O_c$ ) and bottom damage ( $O_s$ ) is calculated by the following formula with respect to compartments breached by damage to all conceivable locations along the length of the vessel to the extent as defined in section 2 of this Appendix.

(1) For side damages: Formula

$$O_c = \sum W_i + \sum K_i C_i$$

(2) For bottom damage: Formula II

$$O_s = \frac{1}{3} (\sum Z_i W_i + \sum Z_i C_i)$$

Where:

$W_i$ =Volume of a wing tank assumed to be breached by the damage as specified in section 2 of this Appendix;  $W_i$  for a segregated ballast tank may be taken equal to zero;

$C_i$ =Volume of a center tank assumed to be breached by the damage as specified in section 2 of this Appendix;  $C_i$  for a segregated ballast tank may be taken equal to zero;

tion 2 of this Appendix;  $C_i$  for a segregated ballast tank may be taken equal to zero;

$$K_i = 1 - \frac{b_i}{t_c}$$

when  $b_i$  is equal to or greater than  $t_c$ ,  $K_i$  is equal to zero;

$$Z_i = 1 - \frac{h_i}{v_s}$$

when  $h_i$  is equal to or greater than  $v_s$ ,  $Z_i$  is equal to zero;

$b_i$ =Minimum width of wing tank under consideration measured inboard from the vessel's side at right angles to the centerline at the level corresponding to the assigned summer freeboard; and