(h) *Buoyancy of superstructure.* For the purpose of paragraph (b) of this section, the buoyancy of any superstructure directly above the side damage is to be disregarded. The unflooded parts of superstructures beyond the extent of damage may be taken into consideration if they are separated from the damaged space by watertight bulkheads and no progressive flooding of these intact spaces takes place.

TABLE 172.065(a)—EXTENT OF DAMAGE

COLLISION PENETRATION	
Longitudinal extent	$0.495L^{2/3}$ or 47.6 feet ($(1/3)L^{2/3}$ or 14.5m) whichever is shorter.
Transverse extent [1]	B/5 or 37.74 feet (11.5m) which is shorter.
Vertical extent	From the baseline upward without limit.
GROUNDING PENETRATION AT THE FORWARD END BUT EXCLUDING ANY DAMAGE AFT OF A POINT 0.3L AFT OF THE FORWARD PERPENDICULAR	
Longitudinal extent	$0.495L^{2/3}$ or 47.6 feet ($(1/3)L^{2/3}$ or 14.5m) whichever is shorter.
Transverse extent	B/6 or 32.81 feet (10m) whichever is shorter but not less than 16.41 feet (5m).
Vertical extent from the baseline.	B/15 or 19.7 feet (6m) whichever is shorter.
GROUNDING PENETRATION AT ANY OTHER LONGITUDINAL POSITION	
Longitudinal extent	L/10 or 16.41 feet (5m) whichever is shorter.
Transverse extent	16.41 feet (5m).
Vertical extent from the baseline.	B/15 or 19.7 feet (6m) whichever is shorter.
GROUNDING PENETRATION FOR RAKING DAMAGE	
For tank vessels of 20,000 DWT and above, the following assumed bottom raking damage must supplement the damage assumptions:.	
Longitudinal extent	For vessels of 75,000 DWT and above, 0.6L measured from the forward perpendicular.
	For vessels of less than 75,000 DWT, 0.4L measured from the forward perpendicular.
Transverse extent	B/3 anywhere in the bottom.
Vertical extent	Breach of the outer hull.

[1] Damage applied inboard from the vessel's side at right angles to the centerline at the level of the summer load line assigned under Subchapter E of this chapter.

TABLE 172.065(b)—PERMEABILITY

Spaces and tanks	Permeability (percent)
Storeroom spaces	60.
Accommodation spaces	95.
Voids	95.
Consumable liquid tanks	95 or 0.[1]
Other liquid tanks	95 or 0.[2]

[1] Whichever results in the more disabling condition.
[2] If tanks are partially filled, the permeability must be determined from the actual density and amount of liquid carried.

[CGD 79–023, 48 FR 51040, Nov. 4, 1983, as amended by USCG–2000–7641, 66 FR 55574, Nov. 2, 2001]

§ 172.070 Intact stability.

All tank vessels of 5,000 deadweight tons (DWT) and above, contracted after December 3, 2001, must comply with the intact stability requirements of IMO Res. MEPC.117(52) (incorporated by reference, see § 172.020).

[USCG–2007–0030, 75 FR 78086, Dec. 14, 2010]

Subpart E—Special Rules Pertaining to a Barge That Carries a Hazardous Liquid Regulated Under Subchapter O of This Chapter

§ 172.080 Specific applicability.

This subpart applies to each tank barge that carries a cargo listed in Table 151.05 of this chapter.

[CGD 79–023, 48 FR 51040, Nov. 4, 1983, as amended by USCG–2009–0702, 74 FR 49239, Sept. 25, 2009]

§ 172.085 Hull type.

If a cargo listed in Table 151.05 of part 151 of this chapter is to be carried, the tank barge must be at least the hull type specified in Table 151.05 of this chapter for that cargo.

§ 172.087 Cargo loading assumptions.

(a) The calculations required in this subpart must be done for cargo weights and densities up to and including the maximum that is to be endorsed on the Certificate of Inspection in accordance with § 151.04–1(c) of this chapter.

(b) For each condition of loading and operation, each cargo tank must be assumed to have its maximum free surface.

§ 172.090 Intact transverse stability.

(a) Except as provided in paragraph (b) of this section, each tank barge must be shown by design calculations to have a righting arm curve with the following characteristics:

(1) If the tank barge is in river service, the area under the righting arm curve must be at least 5 foot-degrees (1.52 meter-degrees) up to the smallest of the following angles: