

- (d) If pipes, ducts or tunnels are situated within the assumed extent of damage, arrangements shall be made so that progressive flooding cannot thereby extend to compartments other than those assumed to be floodable for each case of damage.
- (3) Oil tankers shall be regarded as complying with the damage stability criteria if the following requirements are met:
- (a) The final waterline, taking into account sinkage, heel and trim, shall be below the lower edge of any opening through which progressive flooding may take place. Such openings shall include air pipes and those which are closed by means of weathertight doors or hatch covers and may exclude those openings closed by means of watertight manhole covers and flush scuttles, small watertight cargo tank hatch covers which maintain the high integrity of the deck, remotely operated watertight sliding doors, and side scuttles of the non-opening type.
 - (b) In the final stage of flooding, the angle of heel due to unsymmetrical flooding shall not exceed 25 degrees, provided that this angle may be increased up to 30 degrees if no deck edge immersion occurs.
 - (c) The stability in the final stage of flooding shall be investigated and may be regarded as sufficient if the righting lever curve has at least a range of 20 degrees beyond the position of equilibrium in association with a maximum residual righting lever of at least 0.1 metre. The Administration shall give consideration to the potential hazard presented by protected or unprotected openings which may become temporarily immersed within the range of residual stability.
 - (d) The Administration shall be satisfied that the stability is sufficient during intermediate stages of flooding.
- (4) The requirements of paragraph (1) of this Regulation shall be confirmed by calculations which take into consideration the design characteristics of the ship, the arrangements, configuration and contents of the damaged compartments; and the distribution, specific gravities and the free surface effect of liquids. The calculations shall be based on the following:
- (a) Account shall be taken of any empty or partially filled tank, the specific gravity of cargoes carried, as well as any outflow of liquids from damaged compartments.
 - (b) The permeabilities are assumed as follows:

<i>Spaces</i>	<i>Permeability</i>
Appropriated to stores	0.60
Occupied by accommodation	0.95
Occupied by machinery	0.85
Voids	0.95
Intended for consumable liquids	0 or 0.95*
Intended for other liquids	0 to 0.95**
 - (c) The buoyancy of any superstructure directly above the side damage shall be disregarded. The unflooded parts of superstructures beyond the extent of damage, however, may be taken into consideration provided that they are separated from the damaged space by watertight bulkheads and the requirements of sub-paragraph (3)(a) of this Regulation in respect of these intact spaces are complied with.

* Whichever results in the more severe requirements.

** The permeability of partially filled compartments shall be consistent with the amount of liquid carried.