Coast Guard, DHS

(f) When determining the accelerations for dynamic loads under paragraph (a) of this section, the accelerations acting in a cargo tank must be estimated for the cargo tank’s center of gravity and include the following component accelerations:

(1) Vertical accelerations, meaning the motion acceleration of heave and pitch, and of any roll normal to the vessel base that has an effect on the component acceleration.

(2) Transverse acceleration, meaning the motion acceleration of sway, yaw and roll, and gravity component of roll.

(3) Longitudinal acceleration, meaning the motion acceleration of surge and pitch and gravity component of pitch.


§ 154.410 Cargo tank sloshing loads.

(a) For the calculation required under § 154.406(a)(5) and (b), the determined sloshing loads resulting from the accelerations under § 154.409(f) must be specially approved by the Commandant (CG–ENG).

(b) If the sloshing loads affect the cargo tank scantlings, an analysis of the effects of the sloshing loads in addition to the calculation under paragraph (a) of this section must be specially approved by the Commandant (CG–ENG).


§ 154.411 Cargo tank thermal loads.

For the calculations required under § 154.406(a)(4), the following determined loads must be specially approved by the Commandant (CG–ENG):

(a) Transient thermal loads for the cooling down periods of cargo tanks for design temperatures lower than −55 °C (−67 °F).

(b) Stationary thermal loads for cargo tanks for design temperatures lower than −55 °C (−67 °F) that cause high thermal stress.