Coast Guard, DHS

§ 154.407 Cargo tank internal pressure head.

(a) For the calculation required under §154.406(a)(1) and (b), the internal pressure head \(h_{eq}\) must be determined from the following formula:

\[ h_{eq} = 10 \ P_o + (h_{gd})_{max} \]

where:

\(h_{gd}\) (the value of internal pressure, in meters of fresh water, resulting from the combined effects of gravity and dynamic accelerations of a full tank) = \(a\beta Z\beta Y\);

where:

\(a\beta\) = dimensionless acceleration relative to the acceleration of gravity resulting from gravitational and dynamic loads in the \(\beta\) direction (see figure 1);

\(Z\beta\) = largest liquid height (m) above the point where the pressure is to be determined in the \(\beta\) direction (see figure 2);

\(Y\) = maximum specific weight of the cargo (t/m³) at the design temperature.