



NOTE: LARGEST LIQUID HEIGHT ABOVE THE POINT WHERE THE PRESSURE IS DETERMINED =  $Z_{\beta}$

Figure 2. Determination of Internal Pressure Heads

(b) The  $(h_{gd})_{max}$  is determined for the  $\beta$  direction, on the ellipse in Figure 1, which gives the maximum value for  $h_{gd}$ .

(c) When the longitudinal acceleration is considered in addition to the vertical transverse acceleration, an ellipsoid must be used in the calculations instead of the ellipse contained in Figure 1.

**§ 154.408 Cargo tank external pressure load.**

For the calculation required under § 154.406 (a)(2) and (b), the external pressure load must be the difference between the minimum internal pressure (maximum vacuum), and the maximum

external pressure to which any portion of the cargo tank may be simultaneously subjected.

**§ 154.409 Dynamic loads from vessel motion.**

(a) For the calculation required under § 154.406 (a)(3) and (b), the dynamic loads must be determined from the long term distribution of vessel motions, including the effects of surge, sway, heave, roll, pitch, and yaw on irregular seas that the vessel may experience during  $10^8$  wave encounters. The speed used for this calculation may be reduced from the ship service speed if specially approved by the Commandant