

compared to the similar formulations used by AWWA D100, API 650, API 620, and ACI 350.3. Because of the good performance experienced by tanks designed to AWWA D100, API 650, and so forth, the Seismic Task Committee of ASCE 7 felt that Eq. 15.7-6 should be modified to give results similar to those of the nationally recognized standards on tank design.

The 2003 NEHRP provisions replaced R in their version of Eq. 15.7-6 with $R^{\frac{1}{2}}$. Although this reduction in R gave the desired answer, the Seismic Task Committee felt more comfortable, from a theoretical point of view, using a lower-bound value for Ω_o instead of $R^{\frac{1}{2}}$.

C15.7.6.1.4 Internal Elements A recognized analysis method for determining the lateral loads due to the sloshing liquid can be found in Wozniak and Mitchell (1978).

C15.7.8.2 Bolted Steel

As a temporary structure, it may be valid to design for no seismic loads or for reduced seismic loads based on a reduced return period. The actual force level must be based on the time period that this structure will be in place. This becomes a decision between the authority having jurisdiction and the design professional.

C15.7.13 Refrigerated Gas Liquid Storage Tanks and Vessels

The seismic design of the tanks and facilities for the storage of liquefied hydrocarbons and refrigerated liquids require many considerations that are beyond the scope of this section. The design of such tanks is addressed in part by various reference documents listed in Chapter 23. Designs in accordance with API 620 generally satisfy the requirements of ASCE 7.