

Agenda Item: 653-256

Title: API 653 Tolerance for New Foundations for Existing Tanks

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Contact:

Name:	Steve Caruthers, P.E.
Company:	TCI Services Inc
Phone:	918-583-3968
E-mail:	scaruthers@tank-consultants.com

Purpose: To establish tolerances for new foundations for existing tanks

Source: Discussions on Agenda Item 650-691

Impact: To avoid building a foundation for an existing tank that will change the asbuilt elevation profile of the shell, thus creating unnecessary stresses in the shell. The current requirement is for new foundations to meet the tolerance for reconstructed tanks. For existing tanks which may have not been constructed to the elevation tolerance in Section 10, a new foundation should not change the original elevation profile of a tank shell. This will avoid unnecessary costs for a new foundation.

Background: The current requirement for new foundations on existing tanks is to meet the tolerance for reconstructed tanks. For existing tanks which may have not been constructed to the elevation tolerance in Section 10, a new foundation should not change the original elevation profile of a tank shell.

EXISTING WORDING

4.5.2.1: If there is a need for foundation repair or replacement, foundations shall be restored to the tolerance limits of 10.5.6.

PROPOSED CHANGE

4.5.2.1: If there is a need for foundation replacement or installation, the new foundation elevation profile must meet the tolerance in 10.5.6. Alternatively, if the new foundation is to be poured up to the existing bottom, changing the levelness of the tank is not required if reviewed and approved by a tank engineer considering the plumbness of the shell, presence or absence of shell distortion, and original construction levelness warrant leaving the tank at the current state of levelness.