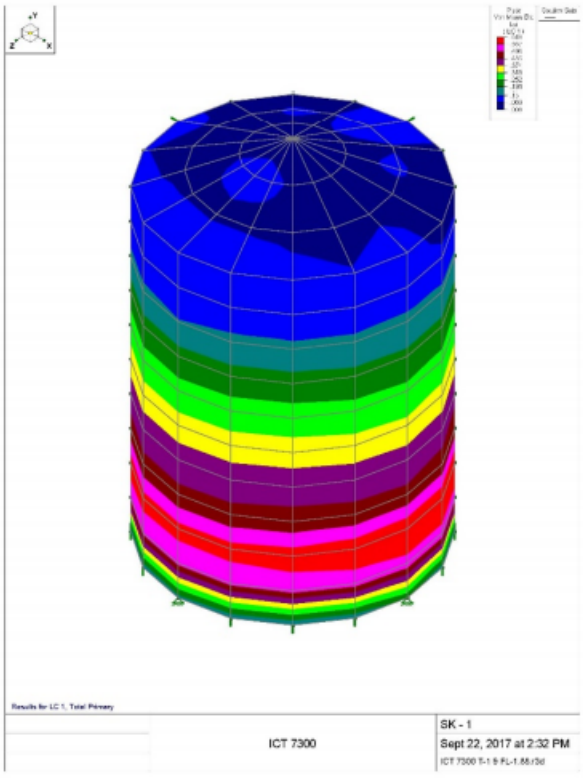
Quality: First and Forever

Uniform Wall vs Tapered Wall Thickness

A WHITE PAPER FROM ASSMANN

What's the difference between an Agricultural tank and an Industrial tank? It's simple, **Uniform Wall Thickness**. In a competitive marketplace it has become a common practice to wrap and weld layers of sheet metal (shielding) around the outside of the rotational mold to reduce heat transfer and thereby reduce thickness over as much as 80% of the area of the tank. Upper sidewalls, domes and tank bottoms are often reduced to less than 25% of the thickness of the lower sidewall.

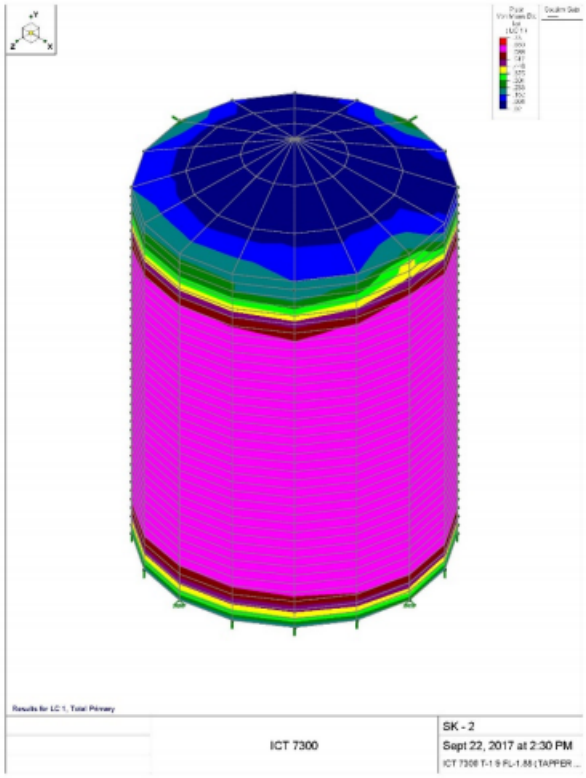
With our forty years of molding and in-the-field experience we have learned that Uniform Wall thickness is far superior to a tapered wall thickness for many reasons. The key difference in our process is that we do not "shield" the outside of our tank molds. We exceed ASTM design hoop stress minimums for the lower sidewall and carry this wall thickness as uniformly as possible throughout the entire tank for maximum structural integrity.



Uniform Wall Thickness

Benefits of a Uniform Wall Tank

- There is greater strength in the high sidewall and dome of the tank when tank restraint systems are put to the test.
- Tank domes will withstand greater loads. Uniform wall thickness makes the roof of the tank up to 3X thicker than a tapered wall tank. Is your tank outdoors in a high snow area?
- Stress cracking agents along with UV deterioration will accelerate dome failure. Uniform wall thickness makes the roof of the tank thicker which will slow down UV breakdown and UV Penetration into your tank
- We exceed ASTM design hoop stress minimums for the lower sidewall and carry this wall thickness as uniformly as possible throughout the entire tank for maximum structural integrity.



Tapered Wall Thickness

Consequences of a Tapered Wall Tank

- There is greater damage when tank restraint systems are put to the test. High stress is placed on the sidewalls of the tank when the tank moves
- Tank domes may collapse, even under snow weight. ASTM minimum dome thickness is 3/16". Is your tank outdoors in a high snow area?
- Stress cracking agents along with UV deterioration will accelerate dome failure. ASTM minimum dome thickness is 3/16". Is your tank outdoors exposed to harmful UV rays? Thin tank domes will break down quicker.

Also, it is important to note "shielding" triggers a loss of control in the process resulting in uneven cooking and significant variations in gel percentages over the tank structure. This will also shorten the service life of the part.

Assmann Corporation is a manufacturer of rotationally molded tanks, ranging from 40 to 12,000 gallons engineered and processed for the most challenging chemical handling and storage applications. We are constantly finding ways to increase efficiency in our process but will not abandon successful methods for any cost-cutting measure that would compromise the quality of the product for which we have become known.

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