



Information Bulletin

It's Not Just Credible, it's INCREDIBLE!!

Recently, some marketing messages have been circulated indicating that the use of Life Cycle Cost (LCC) analysis tools to justify the long-term savings of purchasing an Aquastore® glass-fused-to-steel tank are “invalid.” The question concerning Aquastore’s lowest lifetime cost of ownership stems from a competitor’s statement that “this review (LCC) is not credible and is designed to promote a single glass tank product in the marketplace.”

The use of LCC for product evaluation is quite common. The UK Government’s Office of Government Commerce (OGC) uses LCC because “the visible costs of any purchase represent only a small proportion of the total cost of ownership,”¹ and that reinforces the credibility of the LCC. The fact that the LCC points to Aquastore tanks as having the lowest long-term costs is INCREDIBLE. But don’t take our word for it, perform an LCC analysis yourself.

It is true that the validity of the LCC analysis is only as good as the data used to perform the analysis. Due diligence into the source of the data used and claims of potential vendors is crucial. That’s why the US Government Accounting Office (GAO) cites in the GAO Cost Estimating and Assessment Guide that more emphasis should be put on historical data and not future claims when performing life cycle cost analysis.² The GAO’s Cost Estimating and Assessment Guide was produced to address generally accepted best practices for ensuring credible program cost estimates applicable across government and industry.

LCC analysis is used by federal, state and local governments, and world-class industries throughout the globe. In accordance with a 2008 University of Washington Study, 91% of the US states and Canadian provinces that responded to their survey indicated that they use LCC analysis for major construction projects.³

The National Institute of Building Sciences states that “LCC is especially useful when project alternatives fulfill the same performance requirements, but differ with respect to initial costs and operating costs.”⁴ Life cycle cost analysis, as a part of the evaluation process, is a valid component in the total purchase decision of a municipal or industrial storage tank.

It is important when conducting an LCC analysis that the data used to perform the calculations be as accurate as possible. The OGC offers the following hierarchal list of methods for determining these values with the clear emphasis on actual data having more probability of accuracy than opinions.⁵

- “Known factors or rates” are inputs to the LCC analysis which have a known accuracy
- “Cost estimating relationships (CERs)” are derived from historical or empirical data
- “Expert opinion” although open to debate, it is often the only method available when real data is unobtainable. When expert opinion is used in an LCC analysis it should include the assumptions and rationale that support the opinion.

Engineered Storage Products (ESPC) designed an LCC to assist anyone attempting to determine lifetime value of various types of water storage tanks. When conducting the glass tank portion of the LCC analysis, it needs to be clearly stated that the longevity of Aquastore glass tanks is yet to be finally determined by actual field data. That is because among the thousands of Aquastore tanks in municipal water, wastewater and leachate service around the world, there have been very few tanks that have been removed from service for ESPC to gather data to definitively determine the actual end of service life. Most of them are still in service.

According to a survey by our independently-owned dealers, there are over 800 Aquastore tanks that were installed and put into operation 20-or-more years ago. More than 95% are still in service today.

We base our long life expectations of Aquastore tanks on “almost like new” inspection reports of our own tanks that have been in service more than 20 years (even when the tank is located in harsh maritime settings). In fact, many Harvestore® structures (another glass-fused-to-steel product from ESPC) have been in service for over 60 years in aggressive agricultural conditions. That is why Aquastore can offer up to a 10-year warranty on most municipal applications.

When a tank manufacturer speaks of a tank’s service life, make sure that they can prove it in the field. Recent claims from a competitive tank manufacturer said epoxy coated tanks have a 60-80 year service life. Was that their tank data or data on tanks that were built by a different tank manufacturer? Have they been in business long enough to have developed a list of tanks they have manufactured, built and are still in operation for more than 10 years? Can you trust a tank company that makes claims on tank life cycle but doesn’t have their own list of installations to prove it?

Don’t be fooled by sensationalized claims that some epoxy coatings are significantly evolutionary, let alone revolutionary. As a company that manufactures both glass and epoxy tanks, it is our opinion that *there are no new miracle epoxy coatings on the market that provide drastically better performance than those used by other manufacturers for many years*. ESPC has ongoing R&D that we believe will prove it. Potentially misleading claims to having exclusivity to an epoxy name, let alone exclusivity to the substantive elements of an epoxy product/formula itself, can be misinterpreted as having exclusivity to an epoxy coating that is far superior to others on the market. Claims to having an epoxy coating that hugely lengthens the periods between tank repainting should be challenged and substantiated by the manufacturer with field-tested results.

When you perform your own life cycle cost analysis as part of your tank purchasing process, don’t be concerned if it concludes that Aquastore glass-fused-to-steel tanks have the lowest overall cost of ownership. **It’s not the LCC, it’s the facts.**

References

- (1), (5) Office of Government Commerce (OGC), “Life Cycle Costing”, Office of Government Commerce (OGC), Life Cycle Costing, Crown, 2010-03-09
- (2) United States Government Accounting Office, “GAO Cost Estimating and Assessment Guide”, GAO-09-3SP, March 2009
- (3) US Department of Transportation, “Life-Cycle Cost Analysis in Pavement Design Publication” No. FHWA-SA-98-079
- (4) National Institute of Standards and Technology (NIST), Whole Building Design Guide (WBDG), “Life-Cycle Cost Analysis (LCCA)”, Sieglinde Fuller, Last updated: 12-07-2009