

## PATRICK J. BROWN, P.E.

### Engineering Manager **Tank Industry Consultants**

**Education:** Bachelors of Science, Chemical Engineering - Rose-Hulman Institute of Technology

**Professional License:** Indiana and Virginia Registered Professional Engineer

#### **Industry Leadership**

- Member, AWWA Welded Carbon Steel Elevated Water Storage Tanks Subcommittee
- Chair, AWWA Accessories Task Group
- Member, AWWA D107 – Composite Elevated Tanks for Water Storage Committee
- Member, Steel Tank Asset Management Guide Task Group
- Alternate Representative, AWWA Standard D100 Welded Carbon Steel Tanks for Water Storage
- Alternate Representative, NFPA 22: Standard for Water Tanks for Private Fire Protection
- Alternate Representative, NFPA 25: Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

#### **Years of Tank Experience:** 21

Patrick Brown has a wealth of experience in storage tank design and engineering, having **completed over 3,000 tank projects** in the last ten years of his career at TIC. Patrick's engineering expertise spans the gamut of tank engineering and inspection including new tank construction, repair and repainting of existing tanks, tank evaluations, tank demolition, and evaluation of existing tanks. These projects typically include surface preparation, coating methods, procedures, and types of coatings; sanitary upgrades; safety upgrades; structural repairs, and lead abatement with containment and environmental controls. Instead of reiterating already published AWWA standards, specifications prepared by Patrick are project specific, emphasizing critical or frequently overlooked aspects of the tank and clarifying those requirements in the standards that are necessary to obtain a high-quality and long-lasting product. The following are some note-worthy projects Patrick has provided engineering services for:

**Earthoid Tank, Germantown, Maryland:** The Washington Suburban Sanitary Commission's Earthoid on the campus of Montgomery College in Germantown, Maryland was painted to resemble the astronauts' bird's eye view of the earth when constructed in 1980. It is a fully functional 2,000,000-gallon water storage tank, and a civic landmark for area residents. Thirty-one years later, the tank was in need of repair and repainting. Patrick Brown prepared specifications for the rehabilitation project that included repainting the tank exterior to again resemble a globe. The Earthoid was recognized by the Steel Structures Painting Council (SSPC) with the William Johnson Award in 2013.

**Main Street Tank, Normal, Illinois:** The rehabilitation of this tank on the campus of Illinois State University required extensive coordination with Town, University, and the contractor regarding tank logo and allowable out-of-service time. In addition, the rehabilitation work took place at the same time as the adjacent was being resurfaced. Patrick Brown prepared the technical specifications for the rehabilitation project, and provided contract administration services during the work. The tank was runner-up in the TNEMEC Tank of the Year contest in 2014.

**Orme Tank, Indiana American Water:** The 1,000,000 gallon Orme Pump Station Tank in Greenwood, Indiana was slated for rehabilitation by Indiana American Water. The column and rafter supported roof had experienced extensive corrosion on the interior roof support structure. As a part of the rehabilitation project, the existing roof and support structure were removed, and a new geodesic aluminum dome roof was installed. Patrick Brown was Project Engineer for the project that included alternate bids to compare roof rehab versus replacement, the application of high-solids interior coatings, and the use of robotic blasting units.