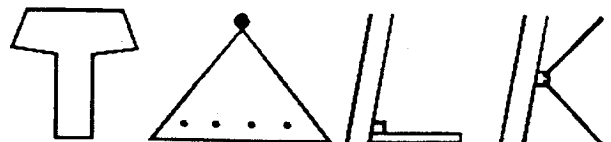


December 1990



Number 15 ©

Published as an informational service to Owners and Engineers of Steel Water Storage Tanks by
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EDITOR'S CORNER

It's often said that the world is in a constant state of change. Nowhere is that change more evident than in the water storage industry. Almost daily we are faced with new regulations and standards, and new products and innovative procedures to enable us to comply with the ever-changing regulations and standards.

We at TANK INDUSTRY CONSULTANTS, are especially concerned with the changes in regulations and standards as they affect the design, construction, and maintenance of water storage tanks. Never before have we had so many of our personnel attending conventions, conferences, symposia, and seminars. Whether we are teachers, students, exhibitors or speakers, we are constantly talking with others about the problems and concerns of tank owners, operators, specifying engineers, and consultants, and we are continually applying the knowledge we gain to help solve these problems and concerns.

In order to communicate what we've learned and problems we've encountered and overcome, much of this issue of TANK TALK® 15 is being devoted to updates on key regulations and standards. If the topics covered remind you of those covered in TANK TALK 14, you're right. Most of the topics covered in TANK TALK 15 were discussed in TANK TALK 14. Some of the regulations we said were expected have now become fact, and others that were emerging have now progressed further. Some problems and challenges that we faced have been overcome, and several of the cautions and concerns that we have expressed are still relevant.

If you have specific problems or need additional information, give us a call. I can assure you that if we don't have the answer, we'll do our best to find it.

TIC® WATER STORAGE TANK SEMINARS

Each year, TIC presents a series of two-day seminars entitled "Water Storage Tanks -- Design, Construction & Maintenance." This year, the seminars are being held at the following locations on the dates indicated:

Orlando, Florida -- January 30 and 31, 1991
Indianapolis, Indiana -- February 5 and 6, 1991
Alexandria, Virginia -- March 5 and 6, 1991

These seminars are designed to familiarize water

storage tank owners, operators, consulting engineers, and contractors with the proper methods of tank maintenance, and the proper construction techniques to assure a virtually infinite life for new water storage facilities.

For more information and detailed brochures concerning these up-coming seminars, please call, FAX, or write to:

Linda Reed, TIC Seminar Coordinator
P.O. Box 24359, Speedway, IN 46224
Phone: 317/244-3221 FAX: 317/486-4708

AN UPDATE ON REGULATIONS AFFECTING THE WATER STORAGE INDUSTRY

This article by Crone Kroy was originally published in the October 1990 issue of The Florida Specifier.

Increased concern for the protection of the environment has prompted regulatory agencies to enforce regulations governing the coatings systems applied to water storage tanks, and the removal of existing coatings. The following is an update on the regulations affecting the water storage industry.

NSF/ANSI Standard 61 - Drinking Water System Components - Health Effects, deals with indirect additives that may contaminate drinking water. The National Sanitation Foundation is the lead organization of a consortium contracted by USEPA to develop standards using a voluntary consensus process. All previous USEPA approvals were withdrawn on April 7, 1990. As of the writing of this article, just three (tank) coatings have been approved for use in contact with potable water, and several dozen others are undergoing the testing process. Most states have indicated that they will ultimately use the NSF standards as their criteria for acceptance, but many states are allowing a "stay of execution" until such time as more coatings can complete the NSF's testing and approval process.

VOC's - Present rules governing the allowable levels of solvent emission of Volatile Organic Compounds (VOC's) during the application of protective coatings varies from state to state. Many states, however, are modeling their VOC restrictions on the criteria established by the State of California. Familiar water storage tank coatings that do not appear to meet this criteria include solvent-based vinyls, conventional alkyds, and epoxy and polyurethane coatings with relatively low solids content. The compliant coatings

are mostly high solids conventional solvent-based materials or water-based coatings. The progression of VOC enforcement will apparently depend on the extent of compliance with clean air standards in each area. Areas currently under VOC restrictions are portions of California, New Jersey, New York, Texas, and Arizona.

Land Ban -- The removal of lead-based paints from water storage tanks has been an area of concern for some time now. The use of silica sand as an abrasive has been restricted in some areas of the country due to the health risks caused by the release of free silica into the atmosphere.

In addition, many of the coatings on water storage tanks contain lead. State and local EPA regulations restrict the levels of lead and silica to which the public can be exposed. New blast abrasives and creative methods of abrasive blast residue containment have been necessary for compliance with these restrictions, and the blast residue has had to be disposed of as potentially hazardous waste. The implementation of the EPA's Land Ban restrictions prohibits the disposal of much of the abrasive blast residue in hazardous waste dump sites. The Land Ban requires that debris which is tested and found to contain greater than the allowable levels of lead must in many cases be stabilized or the lead extracted prior to disposing of the materials. These added restrictions on disposal of the abrasive blast residue further escalate the already costly procedure of removing lead-based coatings from water storage tanks.

The water storage industry is currently faced with a number of environmental restrictions which greatly affect the industry as a whole. Specifying engineers, water storage tank owners, contractors, and suppliers must all be aware of the current regulations governing the application of protective coatings and the removal of existing coatings.

DESIGN LIFE

Those of you attempting to travel by automobile this past summer were probably frustrated by long lines of delayed traffic as roads and bridges were being rebuilt. Articles in the newspapers around here said that the reason the rebuilding was being done was that the roads and bridge decks were built for a 20-year design life. **That's right, a 20-year design life -- and that's with a lot of interim repairs!** Isn't it amazing that the highway portion of our infrastructure is being designed for such a short time span, yet riveted and welded steel tanks built to AWWA Standards are achieving lives of 50 to 100 years and more? We recently inspected a steel standpipe built in 1883 that was still in service. It was in excellent condition! Although we forecast the normal life of a new tank to be 75 years, we believe with proper specification, design, construction, and maintenance, they will have a life of well over 100 years. We have inspected scores of steel tanks constructed in 1916 and earlier which are in excellent condition. Considering the types of coatings and corrosion protection available then compared

to now, are we being too conservative in our life projections?

HERE WE GROW AGAIN!!

In the fall of 1986 we announced the opening of TIC®'s Houston office; in June of 1987 we announced the opening of TIC's East Coast office; and in TANK TALK® 14 (June, 1990) we announced the opening of our Project Office on Long Island, New York. We now have the pleasure of announcing the opening of TIC's Southeast Regional office in Orlando, Florida, located at:

5955 T.G. Lee Boulevard, Suite 172
Orlando, Florida 32822
Phone 407/851-5745

Directing the Florida operations will be Jeffrey S. Marlett. Jeff is a graduate of Rose-Hulman Institute of Technology with a Bachelor of Science degree in Mechanical Engineering. Prior to joining TIC, Jeff was a corrosion engineer for Indiana Gas Company and an engineer with the Environmental Control and Life Support Systems for the space shuttle with NASA at Kennedy Space Center, Florida.

In this age of increased ease of communication via telephone, overnight delivery services, and those wonderful marvels -- FAX machines, we find staying in touch with our branch locations and keeping the lines of communication open with all personnel involved with a project even easier. We continue to work with the nucleus of experienced engineers and quality support personnel at the headquarters office in Speedway, and call upon TIC's pool of skilled inspection technicians to service all projects. Regardless of where in the United States your tank maintenance or new tank construction project is located, you can expect and you will receive the same high-quality, professional engineering service from TANK INDUSTRY CONSULTANTS.

Bob Sterling has joined TIC as Quality Assurance Manager. This is the same basic responsibility as he had with a major steel tank contractor for 12 years. Before that he was a superintendent for a steel erection contractor and a project inspector for a midwestern municipality. Bob and his wife, Kay, have relocated to the Speedway area, but his office continues to be the front seat of his vehicle, on the way to the next tank site.

At the headquarters office, we've added several new faces. Joining the secretarial staff are Sharon Evans, Donna Emanuel, and Angela Cassell. Jack Miller brings to TIC's accounting department over 20 years experience as a "bean counter," most of those with a major tank fabricator. His expertise and organizational abilities have proven invaluable in making our administrative functions more efficient. In the Maryland office, Ethel Volin handles the secretarial functions.