



PUBLISHED AS AN INFORMATIONAL SERVICE TO OWNERS AND ENGINEERS OF STEEL WATER STORAGE TANKS BY TANK INDUSTRY CONSULTANTS, INC., 5010 W. 15TH ST., SPEEDWAY, IN 46224, E. CRONE KNOY, PE, PRES.

EDITOR'S CORNER

Well, I have finally done it. I've stretched out a complete year between TANK TALK's. The nice thing is that people always ask me if I am mad at them and have taken them off the TANK TALK list. To that I reply, "No, I've just been behind in my work again. Besides that, I'm not sure what the TANK TALK list is. There's one on the computer, two or three on masters for gummed labels, and a shoe box full of crumpled notes and business cards." Anyway, my apologies for not getting back to you sooner, and my apologies too if I am not consistent in the mailing list. We're working on it.

We are working on a lot of things here. One reason TANK TALK seems to keep being delayed is we have always been just a week or two away from another milestone in the growth of TANK INDUSTRY CONSULTANTS, INC. and I think, "Well, when we get that milestone passed we will have something really good for the next issue of TANK TALK". It looks like two of the biggest milestones are now being passed. Number 1, and probably of most benefit to our clients, is the fact that David G. Cull, P.E. is now our Vice President-Engineering. David spent 2 years with Watkins and Associates Consulting Engineers in Louisville, 6 years with Caldwell Tanks, and 7 years with Universal Tank. He has a BSCE and Masters in Engineering from the University of Louisville. He serves on the American Water Works Association Steel Tank Task Forces for Conical and Curved Sections, D-100 Revisions, and the Steel Tank Manual. He has also served since May of 1976 as secretary of the Steel Plate Fabricators Association Engineering and Research Committee. Dave presented a paper at the International AWWA Conference in Las Vegas in 1983. He is a registered professional engineer in 28 states.

The other milestone being passed at this time is the moving of our office into more traditional office surroundings. We found that we no longer had a small office in our

home, but we had eating and sleeping quarters in an office. This may be only a temporary location as we have our eyes on an office building for purchase. The office located at 1506 Main Street will be where you can find us, however, we will continue to get our mail at 5010 W. 15th Street to minimize confusion during these transition periods.

Another big milestone occurred almost a year ago, with the adding of Eugene J. Kobliska to our staff. Gene was Field Service Manager for Wallace & Tiernan Div. of PENNWALT Corporation - Cathodic Protection Systems Department for 10 years. He operates out of Cranford, New Jersey and works primarily in the east coast area unless we need his expertise in cathodic protection elsewhere.

Another addition to our staff is Karen Chittum who is faithfully composing this issue of TANK TALK on our word processor and has taken a tremendous load off of Cindy and me.

TALKING ABOUT TANKS

Since the February 1983 issue of TANK TALK we have been busy spreading the word about the design, construction, and maintenance of tanks. Besides the listing of future engagements in that issue, I spoke at the Mississippi WPCA/WPCOA and the Indiana Water Association in April, the NW District of Indiana AWWA in May, two Missouri Rural Water Workshops in August, the AWWA Distribution System Symposium in September, and the Alabama-Mississippi AWWA Section and the Florida AWWA Section in October. November found me before the FmHA Architects and Engineers in Washington, DC and at the Ohio AWWA Section. Cocoa Beach, Florida proved to be a good December setting for the Steel Structures Painting Council Symposium. February in Montana was a great time and location (no kidding!) for an all day seminar on

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tanks sponsored by the Montana State Department of Health Water Quality Bureau and the MSAWWA and MWPCA Joint Education Committee. Later in February it was the Purdue University 23rd Annual Corrosion Short Course and the Missouri Rural Water Association.

March brings a Seminar for Consulting Engineers sponsored by the Pennsylvania FmHA at Milesburg and then the Illinois Section AWWA. May 1 will find Dave Cull speaking before the Missouri Water and Sewage Operators Annual Conference at Monett, MO and on May 17 I will address a district meeting of the Illinois Water Operators Association at Springfield. June will find us at the International Conference at Dallas extolling the beauty of tanks. August 15 will find me conducting a review of tank maintenance for the Alabama Water and Wastewater Operators Short Course. October 1 I will be at the Arkansas RWA.

In addition to the above, we conduct private seminars for consulting engineering firms and water utilities operating personnel.

DESIGNING EXTERIOR COATING SYSTEMS FOR EXISTING TANKS

Repainting the exterior of a tank or any steel structure is not just a matter of selecting a coating. The design for repainting is a process of determining:

1. The condition, generic type, and thickness of the existing coatings and the condition of the steel
2. The desired objective of the painting -- are you interested in merely controlling structural deteriorating corrosion with no concern for aesthetics? -- is appearance of primary concern? -- will the site surroundings become more developed in the future?
3. The amount of funds available
4. When the interior will need painting
5. The site and environment in which the work is done

Old alkyd, oil, or acrylic coatings of more than 10 to 12 mils thickness tend to start to have a mind of their own, that is, they start

to not move with the steel, developing cracks and starting to peel. Topcoating these materials regardless of thickness frequently accelerates the process of failure, especially if materials using some of the "hotter" thinners are used as in the "dry-fall" materials. Therefore, if the steel has over 12 mils of these type paints on it and aesthetics are of no concern, just spot cleaning and painting the deteriorated areas may give you more years corrosion protection than attempting to apply more paint over all the structure. Spot sandblasting will have to be done judiciously as the older coatings are usually brittle and it is hard to stop the paint removal process and the edges may have to be hand cleaned. If corrosion is not serious, sometimes power tool cleaning will suffice as it does not disturb the adjacent coatings as sandblasting does.

Another misconception is that of specifying an SSPC-SP 7, "Brush-Off Blast Cleaning" prior to topcoating old paints. Brush-Off Blast Cleaning can usually not be performed without going completely through the existing coatings in minute spots down to the bare steel -- with most coatings, this necessitates the overall priming of the steel. SSPC-SP 7 should never be specified unless the degree of removal or depth of sandblasting is specified.

Before topcoating any system, it is imperative that the designer know the type of coatings presently on the structure. The new coatings must be compatible. Many times laboratory or field tests will be required to make this determination. One should never look at the specifications for the last painting and assume that the material specified was used. In over half the cases, materials used were different than those specified.

When analysis of the present coatings and steel surfaces indicate that complete removal of all old coating is necessary, the selection of the new exterior coatings is then dictated by the shape of the structure, the probability of paint damage to surrounding property, the money available, the colors desired, the resistance to graffiti desired, and the anticipated climatic conditions during the scheduled time of application.

Be sure to anticipate all repairs necessary, and provide for the completion of them before the cleaning and painting of the structure.

TANK TALK Number 5 will discuss the options available in types of coatings.