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Tank Talk

Is Your Tank Old? Rusty? Both? Why?

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The ravages of time are well known. Just look at grandpa's high school graduation picture. Old tanks are normally torn down before they fall down, and most of the tanks erected when your grandfather graduated from high school have already been torn down. The average elevated tank is demolished when it's 40 to 60 years old, but a few older tanks are still standing. Did you ever wonder why?

Time has no affect on the steel used to construct water storage tanks, but rust is a killer. Rust is the common name for the process of oxidation; the steel in tanks will rust unless steps are taken to prevent it.

Regular inspection and good maintenance are keys to tank longevity. Some tanks rust faster and more severely than others, because they are more difficult to maintain. Nooks and crannies are difficult to inspect and hard, if not impossible, to affectively protect from the elements that promote rust. The pinned connections at the ends of diagonal bracing and sway rods are good examples. Tanks with smoother, simpler outlines are replacing multi-legged elevated tanks with lattice legs.

Tank owners know that replacing steel lost to rust and repainting tanks are expensive. Regular inspections, preventive maintenance, and good engineering details are important to the service life of the tank. Inspections have to be thorough and detailed and performed by experienced and qualified inspectors. Maintenance has to be done when needed and well done. Good engineering details aren't standard. Design standards, like AWWA D-100 provide only minimum requirements. Details that reduce maintenance problems are specific to each style of tank. Unless these details are included in the specifications, contractors will furnish the minimum. This applies to new tanks as well as to the rehabilitation of existing tanks.

The first steel tanks were constructed from steel or wrought iron plates fastened together with rivets. World War II accelerated the progress of electric arc welding. Welding has proven to be more "maintenance-friendly" than riveted construction.

When you decide you need a new tank or your existing tank needs to be evaluated, call Tank Industry Consultants. We have twenty-six years of experience helping owners avoid and solve tank problems. We inspect tanks, coatings, and contractors' work . We know the details and how to specify them to minimize your maintenance costs.

Ray Penny is Manager of TIC's Southwest Regional Office, Ray has nearly thirty years experience in storage tank engineering, including twenty-seven years with Chicago Bridge and Iron Company, an international tank fabrication and construction company.