

SCP Tribune[©]

Beyond Meter Readings

Every regulation for safe hot work (the National Fire Protection Assn.'s Standard 306, OSHA's Maritime Standard, the Navy's Standard Items) puts great emphasis on meter readings.

It's easy to see. Chapter and verse, regulations tell the Competent Person: Your meter has to be able to test at least 3 functions: Your meter readings must be thus and so: Your meter must be calibrated before each day's use: Your meter readings must reflect different areas of a space: Meter readings must be compared with other readings: Your meter readings must be logged down: Your meter readings (and the calibration records!) must be filed for 90 days after the job is done. And so on.



Meter readings miss the danger of nearby foam insulation

All this emphasis on meters and readings is great for preventing explosions, but may not help prevent fires.

Why? Because material that burns (foam, thick paint, fabrics, furnishings, diesel) are not likely to be detected by meter readings!

If the regulations put the same emphasis on preventing fires that they do on preventing explosions, they might write some standards about how bright your flashlight should be to properly inspect for electrical insulation, or the ignition temperature of polyester rugs, or the size of white-hot slag particle needed to ignite isocyanate foam.

But, they don't. So, an effective corporate safety policy aimed at fire prevention aboard vessels should not simply note and follow these necessary regulations about meter results. (Continued on the next page.)



TRAINING

Shipyard Competent Person

3-Day Initial

Aug 12-14

Aug 19-20 *

Sep 9-11

1-Day Updates

Aug 13

Aug 20 *

Aug 26

Sep 10

Sep 23

*San Pedro, CA



OSHA 10 Maritime & General Industry

10-hour training on 29 CFR 1915 or 1910 provides methods on recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces specific to the maritime or general industries.

Please call our office (932-0206) for the next class date.

Beyond Meter Readings, Cont.



Safe for Hot Work?

We should perhaps design into our fire safety program an exaggerated emphasis on the danger of solid hydrocarbons (such as fabric or foam insulation), on the importance of fire watches with water lines, on the proper distance between stores and an arc-gouging operations, on standards of effective housekeeping, and so on.

Such an increased emphasis on solid combustibles might have prevented the last four destructive vessel fires on the local waterfront.

As it is, workers might be tempted to think good meter readings alone will prevent fires.

They won't.

Full or Empty?

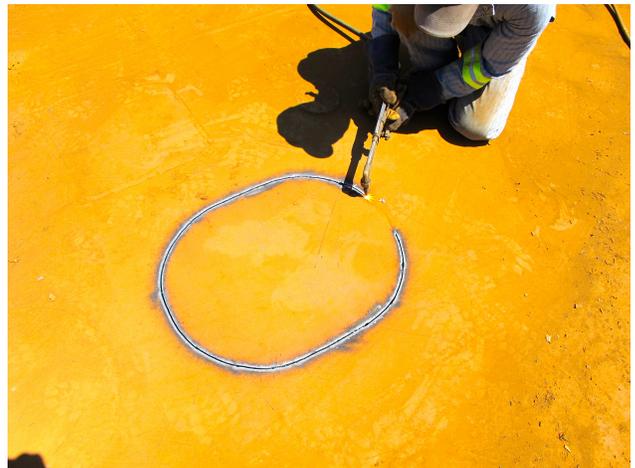
For August we consider another common question concerning the useful process of tank inerting. (Please recall that when the Chemist replaces a tank's air with an "inert," non-burning gas such as carbon dioxide, you may weld or burn directly on the tank's steel without danger of causing a fire or explosion from the fuel within the tank.)

The common question we get from the Chief Engineer is, "It'll be better to pump the tank full of fuel before you inert it, right?" Chief, don't.

Here's why. An inerted tank is essentially unstable. The reason: the inert gas in the tank tends to leak out. Plus there is a larger amount of surrounding air tending to get back into the tank.

So, if there is just a little bit of void space because the Chief has pumped fuel into the tank, the little bit of inert gas in the small space can be easily diluted by normal air flow and so is doubly unstable and untrustworthy.

On the other hand, if the tank starts out empty, the large volume of inert gas in the tank will take a long time to be diluted, and will be stable and dependable for a much longer time. (Continued on the next page.)



An empty fuel tank, inerted for relocating a manway, was much more stable because it contained a large amount of inert gas.

dependable for a much longer time.

Ask a Chemist

Question: On the weather deck we were welding a patch over a hole in a vent line from a bilge water tank in the engine room, 4 decks below. Should the Competent Person have checked the line, even though the tank contained water and was so far away?



Answer: Any 3" line, even near its opening, should be treated like a "hollow structure." So, you can see that OSHA in its instructions to welders (Subpart D) requires that the Competent Person check the line for safety. Also, tanks in OSHA (and the NFPA) are included with the note that tank dangers may extend to the piping attached to the tank and considered part of the tank.

Moreover, there is no guarantee the bilge water tank has just bilge water! If various oils and solvents have contaminated the "bilge water," repairs will require a Marine Chemist. Either way, the Competent Person should test both the vent and the tank so he is "Dealing in the world of certainty."

Full or Empty, Cont.

True, a fueled-up tank saves buying carbon dioxide. But, carbon dioxide is cheap...less than 3 pennies per gallon air space.

Another thing to watch out for is this: A nearly full tank has fuel near the vent. Inerting is a turbulent process and so for fear of blowing fuel out the vent, the Chemist must take care and a lot of time to inert a full tank. And that time will likely cost more than the CO₂ savings. Plus, to make the tank reliable the Chemist may have to use a continuous flow of inert gas, which again will cost more money.

Better to have the tank less than half full when the Chemist is called to inert it. The tank will be more stable.



Because this tank was almost full, a continuous flow of inert gas was needed for safe work.

Congrats to **Brian Stich** from **Crowley Maritime** for winning last month's quiz and a \$25 gift card!

Last Month's Quiz:

Q: When working around flush manways, how high must guards be? **A:** When employees are working in the vicinity of flush manholes and other small openings of comparable size in the deck and other working surfaces, such openings shall be suitably covered or guarded to a height of not less than **30 inches**, except where the use of such guards is made impracticable by the work actually in progress.

This Month's Question:

The superintendent instructs the riggers, "...range those shots for blast and coat, right to the bitter end!" What in the world is the superintendent referring to?

Submit your answers to newsletter@soundtestinginc.com before August 25, 2015. All correct answers will be entered into a random drawing and one person will win a \$25 gift card!

One entry per person, please.