

SCP Tribune.®

Explosions in the Industry



Crude Oil Tank Ship SHOKO MARU located in a port west of Hiroshima exploded May 29, 2014. Picture courtesy of Japan Daily Press.

This Japanese tank ship exploded on May 29, 2014. Some news reports indicated that while grinding paint and rust off the main deck, sparks might have ignited fuel oil or residual crude oil cargo. The cargo tanks were not loaded and the Japanese Coast Guard is still investigating.

As we all know, crude oil vapors are well within the flammable range. Tank vents from heated fuel oil may also have vapors that are within the flammable range! Flame screens may be damaged or missing. Although we don't yet know the exact cause of this accident, it is another reminder to control our incendiary sparks and hot work!

In April, OSHA released its findings after another explosion that occurred in the Gulf region in 2013.

In this case a Tank Barge that carried gasoline was being ventilated before tank cleaners were to remove residual product and clean the tanks. Large pneumatic blowers were used for ventilation. As a tugboat pulled up in the adjacent berth, employees heard strange noises coming from one of the blowers on the barge. (Continued on next page)

TRAINING

Shipyard Competent Person

3-Day Initial

June 4-6

July 9-11

1-Day Updates

June 18

July 30



OSHA 10-HR

June 12-13 (Everett)

OSHA 10 Maritime

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

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



Damage to a Gasoline Tank Barge after explosion. Courtesy of OSHA

Explosions in the Industry (Continued)

The ventilation air compressors were shut down to investigate the problem and employees tried to inform the tug to leave the area. However, the tug engines began racing and the Captain could not shut the engines down. Nor could he hear the warnings to leave the area. It was too late. Vapors ignited causing the barge to explode sending 3 people to the hospital with severe burns.



Surveillance photo courtesy of OSHA

The OSHA investigation determined that flammable vapors from the barge migrated into the tug's engine through the air intake.

These incidents are just two examples of ordinary operations that had catastrophic effects. Anytime fuel vapors can be present, we should always take extra care and attention to monitor projects in the area.

Anyone interested in viewing the video of the Mobile Barge Explosions is welcome to call us. (206-932-0206)

Watch Out for Physical Hazards

Because regulations like OSHA are really specific about the meter readings that describe fresh air, (21% oxygen, 0%LEL gassiness,) we shipyard safety people may forget that, actually, more workers are injured by physical dangers than by the airborne kind.

Falls starting with a slip or a trip cause the most injuries. The next type of culprit is poorly guarded openings in "work surfaces" such as staging or walkways.

Other causes are myriad: Ergonomic, as in repetitive wear and tear of muscles or ligaments. Mechanical as with poorly-guarded machines. Then we have potential energy, as when pallets are stacked too high. There is no end to the interesting harm we can do ourselves when working. (Continued on next page)



Slippery mud coating on steel.

Ask a Chemist

Question: May I use a CO₂ fire extinguisher to inert a diesel fuel tank for hot work?

Answer:

CO₂ is CO₂, and it could be done. However, let's ask a few more questions.

Who? According to NFPA 306, 2014 Edition, an excerpt from Section 5.2.1 states the following: "The Marine Chemist shall approve the use of the inerting medium and shall personally supervise introduction of the inerting medium into the space to be inerted, except in situations where an inerting medium has been introduced prior to the vessel's arrival at the repair facility." So, a Marine Chemist might decide to use the CO₂ from a fire extinguisher, but there are certainly limitations! **How and Why?** How much CO₂ is really in the extinguisher & will it be distributed throughout the tank, displacing the oxygen to less than 6% Oxygen? Was the impact from CO₂ on the instrument sensors considered? Is the work above the fuel level in the tank?



Watch Out for Physical Hazards, cont.

Finally, please note how physical dangers can exist both within or outside the spaces we check. For instance, getting yourself through a tank manway high on a bulkhead may be more dangerous than anything you might meet within the tank space.

None of these hazards should be a secret. And an interested Competent Person with a bright flashlight can bring notice of them into the daylight.



Notice How this Company Works Hard to Keep Employees Safe from Unguarded Openings

Are there cascading fuel openings to other fuel tanks? Is inerting the right approach for the work (will the work open up a hole, spray fuel, and cause a fire)? **Bottom line question:** Is the tank truly inert at the work site, or will the tank catch fire? Who will be responsible?

Last month's mystery apparatus stumped everyone including some of us at Sound Testing.

Last Month's Quiz:

Can you let us know what this instrument is and its function of the globe in the image? This antique looking globe-like apparatus is a watertight integrity test indicator. This scanner is a leak detector that checks the integrity of watertight seals. Pointing the scanner receives the high frequency sound made by the generator and converts this to an audible tone. The changes in the distinctive sounds and patterns allow the operator to identify problem areas.

This Month's Question:

According to OSHA 1915 Subpart P, Requirements for fire watch duties state that the fire watch must be trained to alert others to exit a space whenever these 4 conditions arise. What are these 4 conditions?

Submit your answers to newsletter@soundtestinginc.com before June 25, 2014. All correct answers will be entered into a random drawing and one person will win a \$25 gift card! One entry per person, please.