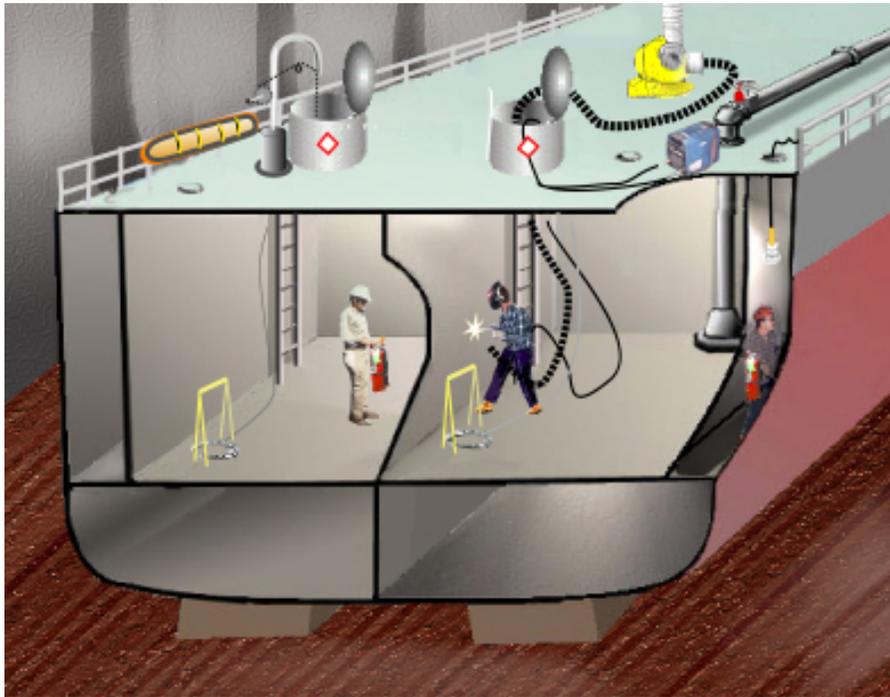


SCP Tribune.®

Watch Those Adjacent Spaces



A fan room on a roll-on/roll-off container ship was inspected, found to be perfectly clean, and OK'd for welding a compressor foundation to an inboard bulkhead. Nobody checked the next-door space, which turned out to be laundry stowage: napkins, sheets, pillow cases, tablecloths, towels, etc. White-hot production welding on the bulkhead set fire to the linens next door, causing more than \$2,000,000 of smoke and other damage.

Q: Why are "adjacent spaces" so troublesome in ship repair? **A:** Perhaps because they're often invisible, hidden behind bulkheads or below decks. They also tend to be unique to ship repair. For instance, "adjacent spaces" are not even mentioned in OSHA's other major regulation, the "General Industry" Standard. If not on a ship or barge, confined spaces tend to be isolated, like a single concrete electrical vault, or a single above-ground storage tank. They stand alone, with nothing touching them.

But in our industry confined spaces are chock-a-block-jumbled-together, sharing not only bulkheads, but also corners and overheads and other "points of contact."

In other words, a single tank may easily be in physical contact with 7 or 8 "adjacent spaces."

(Continued on the bottom of next page)

TRAINING

Shipyard Competent Person



3-Day Initial

April 8-10

May 6-8

1-Day Updates

April 9

April 22

May 7 (Sea)

May 7 (Brem)

May 27

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.

Daily Inspections

Inspecting vessel tanks for safe entry and hot work is a basic Competent Person duty. But sometimes climbing through the same tank day after day, we have to fight the twin enemies; routine and boredom. The strong temptation is to simply drop the remote sampling hose into the tank and if the meter alarm doesn't go off we call it good.

In early February a vessel's SCP found just that temptation as he tested a fuel tank, already cleaned and under repair for some days. After fresh-air readings near the



manway, he followed good practice and entered the tank. Half-way down the ladder his eyes began to burn and his nose was irritated. Not only that: a glance at his meter showed the oxygen reading had dropped from 21% to 20.1%. Obviously, something was amiss.

The SCP, of course, climbed out the ladder, his heart pumping somewhat faster than before. After posting the tank opening "STAY OUT" he completed his survey, filled out the morning's log and asked the engineer to arrange ventilation.

That's when he found out the engineer had piped some inert gas into a nearby service tank preliminary to hot work repairs. Because the tanks shared a common vent, some of the irritating CO₂ had leaked by accident into the open tank.

How much? Not enough to set off the oxygen alarm, but enough to contaminate the tank with about 10-times the legal amount of carbon dioxide.

Adjacent Spaces, Cont.

So it's the Competent Person's job to make sure those many adjacent spaces will not cause fires when hot work is done nearby. Adjacent spaces won't cause problems if:

- 1) They're not affected by the heat of repairs
- 2) Meter tests show they are not explosive dangers because their L.E.L. readings are less than 10% of the amount needed for an explosive atmosphere
- 3) They're clean enough so if there happens to be a fire at the repair site it will remain controllable and won't spread.

If it's any consolation, we shipyard types know more about "adjacent spaces" than anyone else in the industrial world.

Ask a Chemist

Question:

On second shift, the Shipyard Competent Person found a void on a huge ocean-going deck cargo barge with low (about 18%) oxygen.



There was only the one access manway, and no vent. Since the surveyors won't be onsite for another 15 hours (10am next day.) will natural ventilation fix the situation and provide fresh air? Or, does someone have to run the power cord, fetch a blower out to the tank and set up some forced air flow?

Answer:

It looks like forced-air ventilation is the only answer! This tank was so big the slight turbulence of the evening breeze at the open hatch would not guarantee the tank would have an overnight air change.

A fan with intake well clear of the manway and ducted to the void bottom would give several overnight air changes. This is great news because the oxygen shortage would be solved by only a single complete air change.

MACOSH Update

OSHA: What does it mean to you? Whatever your take on OSHA, we maritime people are only a small portion of OSHA's mission. So, our concerns may slip through the regulatory cracks. You will be happy to know that the Maritime Advisory Committee for Occupational Safety and Health (MACOSH) has improved communications between the Maritime Industry and regulators. We in the Washington/Alaskan ship repair community are well-represented by the efforts of Committee Member and Sound Testing's Marine Chemist Amy Liu.

A current focus of the MACOSH Committee is providing guidance for fishing vessel crews involved in the repair of vessel refrigeration systems. There is background information and tips and reminders for the identification of leaks, sampling and knowing when to call refrigeration specialist.

The Committee is also focusing on vessel housekeeping. Housekeeping can be a challenge underway as well as during repair periods.

Be on the look out for Quickcards and Fact Sheets. These products, for instance, can be topics for safety meetings, or distributed in break areas for light reading. If you have an oar in that water or would like to know the details of the Committee's efforts, contact Amy (206-228-0166) any time with questions, suggestions, or concerns!

Congrats to **Mike Schrock** from **Westport Yachts** for winning last month's quiz and a \$25 gift card!

Last Month's Quiz:

Q: The journeyman pipefitter on a sewage repair project has an apprentice helper. Who gets to move the pneumatic plug pictured to the right when repairs are complete? And why?

A: The apprentice, because he/she has less seniority than the journeyman pipefitter.

This Month's Question:

Legal limits for most toxics are listed in the standards in "parts per million." But some are not: they are listed in "milligrams per cubic meter." Why this "milligrams per cubic meter"? Why are not all values in "parts per million?"

Submit your answers to newsletter@soundtestinginc.com before April 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.