



SCP TRIBUNE[©]

Mental Aerobics

We know it's the Competent Person's duty to test workplaces before workers enter them, and before workers weld or burn in (or on!) those spaces.

In addition, competent people have their own crafts to take care of. Balancing the two jobs is a challenge. And that's not all. It turns out that understanding a gas test meter is also a challenge. Why? Because the SCP must balance TWO types of percent scales in their heads at one time. Here's what we mean:



A meter's oxygen tester reads a straightforward percent: 21% in fresh air. If we have a box containing 100 particles of fresh air, 21 of them will be oxygen. OK. So, isn't the combustible gas's "lower explosive limit" reading also in percent?

Sort of. But while the "L.E.L." function reads gas as a "percent," it's not the same kind of percent as the oxygen reading. A gassy reading of, say, "5%" does not mean 5% of the air is gas: Instead, it is telling us (Continued)

TRAINING SCP CLASSES

Full 3-Day Courses

JUL 10-12 @ SSC*
 AUG 7-9 @ SSC*
 SEP 4-6 @ SSC*
 OCT 2-4 @ SSC*

1-Day Update Courses

JUL 11 @ SSC*
 JUL 18 @ Fishermen's Terminal
 AUG 8 @ SSC*
 AUG 15 @ Fishermen's Terminal
 SEP 5 @ SSC*
 SEP 12 @ Fishermen's Terminal
 OCT 3 @ SSC*
 OCT 10 @ Fishermen's Terminal

DIRECTIONS:

Fishermen's Terminal:

Nordby Conference Room

*SSC: Georgetown Campus very close to I-5, Michigan St. Exit, straight to Corson Ave. S.

OSHA 10 Maritime:

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.

Mental Aerobics, Cont.



Below, note two 5-gal toluene cans, each empty of liquid, but full of toluene vapor. That 10 gal of toluene vapor, if put into the 1,000-gal tank, would amount to only 1% of the tank's volume. But, it would make the tank 100% explosive! (The L.E.L. of toluene is only 1%.)



that however much gas is there (in a void or tank,) it amounts to about one-twentieth (5%...) of the gas needed for an explosion.

And this allows workers, without worrying about exactly how much gas is present, or even what type of gas they are dealing with, to get to the essential point: "How close are we to a disastrous explosion?"

However simple you may think Competent Person work may be, it's not simple-minded; The SCP uses test gear to get 2 different kinds of percentage readings at the same time.

Safe Hot Work

The 4 rules for declaring a project "Safe for Hot Work" are fairly straightforward;

First, keep the oxygen under control. Nothing over 21% allowed.

Second, make sure there is less than 10% of gassy vapor needed for an explosion. (Competent people simply say that the meter's "L.E.L." reading has to be less than 10%.)

Third, get rid of anything which might burn. And last... Fourth, make sure nearby spaces are cleaned, or are not affected by the repairs. Competent People all agree on these measures.

So, when a barge's vapor-recovery line needed a clean-out installed, why was the owner required to call a Chemist to make sure the barge was inert, nearby voids tested, the pipe cleaned and isolated, and the deck below protected? (Continued)



Safe Hot Work, Cont.

Because OSHA (and industry) (and the Coast Guard) (and insurance policies) all demand that a Chemist be the first to sign off on hot work projects in spaces that have contained OIL. Why? Because those projects are more risky by nature. Also, every Port Engineer knows that Sound Testing Marine Chemists bring substantial London-based insurance to back up our efforts.

Under the Big Top



Because shipyards are so highly visible, the Puget Sound Clean Air Agency must take notice when a shipyard operation generates "fugitive dust." In many cases, shipyards must "tent over" dusty processes.

But the plastic tent that contains dust from sandblasting or smoke from repairs can bring its own unique problems. For instance, in early May sparks from two levels up set fire to the glue joining the plastic sheets of a tent wall. Who knew that glue is so flammable?

Dust Cover for Barge Sandblasting

And once in place, tents can act like confined spaces. Meaning, they collect the exhaust from pressure washers, or the solvent vapor from paint spray, or paint smoke from hot work repairs. And such a toxic workplace must to be monitored.

So, dealing with a tent with such contaminants puts yet another burden on the Employer and his Shipyard Competent Person.

Congratulations to **Ken Beilke** of **Washington Marine Cleaning** winner of June's quiz.
Honorable Mentions: Tom Erickson, Jan Calloway, Tom Ford, Nick Simpson and Joel Coffey.

Q: When the old boilermaker says his toolbag is lighter because he left his "button set" in the tool room, what's he referring to? **A: 15-lb SLEDGE HAMMER**

July's Question:

**At 1% in air you're dizzy, At 3% you're wobbly and deaf
At 5% - 8% you're on the deck and officially, you've got hypercapnia
What gas is in the workplace?**

Please send your answer to newsletter@soundtestinginc.com or admin@soundtestinginc.com before July 25th, 2019. The winning answer is picked randomly from amongst other correct entries by Mr. Evan Liu.