



SCP Tribune[®]

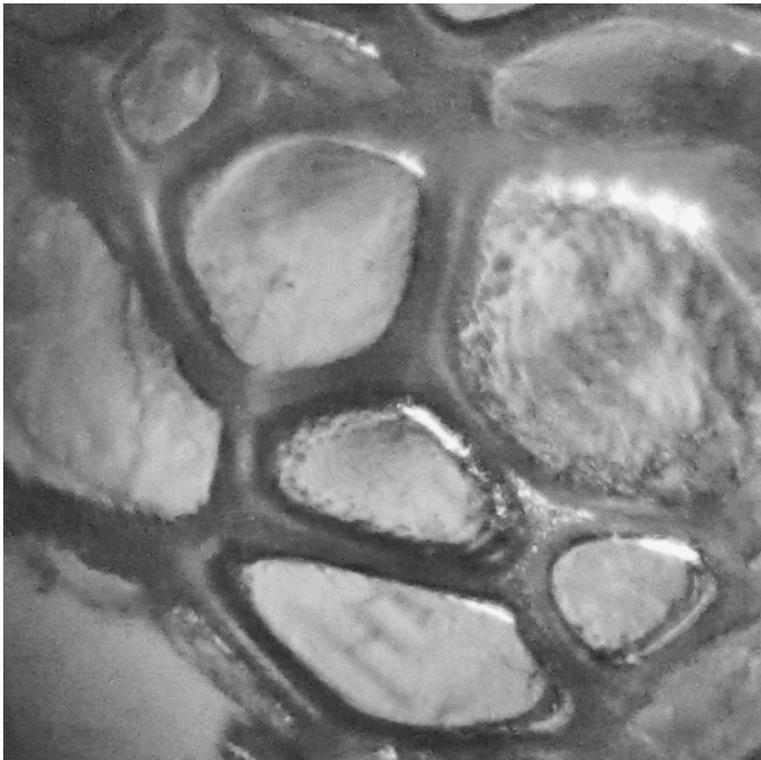
Abject Fear

We all like to stride about the earth's surface as though we own it. But when the Competent Person or Chemist writes "Safe for Hot Work" judgments for spaces which contain insulating foam, the best strategy is: abject fear.

The reason, of course, is that in this Alaska/Puget Sound part of the world, we have been educated. First, we have learned that foam insulation is made up of a whole bunch of H's and C's. Meaning, it is a HYDROCARBON. Like diesel. Or, for that matter, like gasoline.

And second, we remember from our SCP course this picture of a microscope slide of foam: Foam is made of cells. And, while the cell boundaries (shaded dark) are about 1/10 the thickness of a piece of paper, the cell centers (shaded light) are, literally, microscopically thin. So?

(Continued)



TRAINING

Shipyard Competent Person

Full 3-Day Courses

Nov 7-9 @ SSC*

Dec 5-7 @ SSC*

Jan 9-11 @ SSC*

Jan 22-24 @ Anchorage

*South Seattle College
Georgetown Campus



1-Day Update Courses

Nov 8 @ SSC*

Nov 14 @ Fishermen's
Terminal

Dec 6 @ SSC*

Dec 13 @ Fishermen's
Terminal

Jan 10 @ SSC*

Jan 17 @ Fishermen's
Terminal

Jan 23 @ Anchorage



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.

Any Questions? Call 206-932-0206

Abject Fear, Cont.

As you can see, these foam "fuel" cells are so thin that a white-hot piece of slag has plenty of energy to do 2 scary things: Landing on the foam, a spark can in one instant both vaporize the foam, and then ignite that vapor. Meaning that while a piece of cardboard or wood would be still getting warm, a foam fire could be out-of-control.

So, we know (OSHA's Subpart P) that if heat or a spark can reach foam, that foam insulation must be either removed, or isolated from hot work. But such neat solutions are not always easy.

Consider a shipyard which this month will weld 3/4" doubler plates on a fish processor's maindeck (with insulation stuck to the bottom of the weld surface.) No removing that insulation; too expensive. No isolating it either. So, that insulation is going to get hot. What to do?

Do what the shipyard did: Call the Chemist. In their office Chemists have some 90+ years of experience to draw on.

Second, follow their directions. The details of the process (personal protection, ventilation, fire protection, specific gear, communication measures, training and supervision) change job to job. So, we can't be too specific here. But, the most essential part of the process remains: Maintain that abject fear of hydrocarbon foam.



The Nerve-Center

Several years back a boatyard hauled a steel-hulled pleasure craft. Because the boatyard's expertise was fiberglass, not steel, they brought in a welding company to repair (insert...) some wasted steel hullplate.

The resulting fire showed that the welders, who were not shipyard people, didn't appreciate the dangers addressed by OSHA's Maritime Standard. And when millions of dollars went up in smoke it was soon apparent that some smart lawyers were waiting for it to come down. And they could read the small print.

They focused in particular on 2 obscure paragraphs in OSHA's Maritime Law: The first, 29CFR 1915.12(d) says the Employer must document that every production worker on the job has been specifically trained in the dangers that come with work in confined spaces.

And the second {1915.12(f)} tells every employer that if he's aware of any such dangers, he has a legal duty to share that information with EVERY OTHER EMPLOYER whose workers are on that worksite. To some extent, we are our brothers' keeper in this dangerous industry.

Why do we mention these topics? Because Shipyard Competent People are at the nerve-center, both for discovering dangers and documenting a shipyard's safety efforts. And in many cases SCPs also train fellow workers to be aware of hazards and to deal with them safely.

This is more evidence that safe ship repair requires the services of involved Competent People.

Hot and Cold

Water has a unique property that which not everyone appreciates, but which Competent People know to be essential. We refer to water’s “change of state” energy.

We know liquid water absorbs a lot of heat as it gets warmer. But, that’s not our topic here.

Here we’re talking about the tremendous amount of heat needed to change liquid water to steam. How much? 540 calories-per-gram! This means that liquid water can be an extremely effective barrier to the transfer of heat.

This “heat of vaporization” is the reason we make sure our fiberglass curtains are wet before the hot work starts. With each teaspoon of water, we’re 540 calories to the good.



And if you want to isolate a pipe from nearby sparks, a water plug can be absolutely effective.



(Note image) Ordinary cotton, soaked with water and pounded so tightly into place that it is liquid-tight for more than 30 seconds, provides an effective, if temporary, barrier to heat. Why so? Because each gram of water must absorb 540 calories of heat before a spark could penetrate the surface.

But with that comes the bad news: Steam, when it condenses to water, **gives up** 540 calories per gram. And when the steam condenses on skin, that skin is seriously burned.

Thus last month when steam, so hot it was invisible, leaked during boiler repairs, it burned a worker. He spent a week in hospital because of the extreme tissue damage caused by condensing steam.



Congratulations to October’s winner **Eric Martin** of **Saybr Contractors**
Honorable Mention: Lucas Johnson

Last Month’s Q: Spiral ladder found in some cargo holds or machinery spaces is an **AUSTRIAN** ladder. Always be safe when going “down under” into the cargo hold.

This Month’s Question: We all know that a craftsperson, (a welder, for instance,) may not work from a ladder if their personal protection limits their field of vision. Except in one case. When do the rules allow a welder to work from a ladder?

Please send us your answer to newsletter@soundtestinginc.com or admin@soundtestinginc.com before November 25, 2018.

Every correct answer will be entered into a random drawing and one person will win a **\$50** gift card! One entry per person, please.