

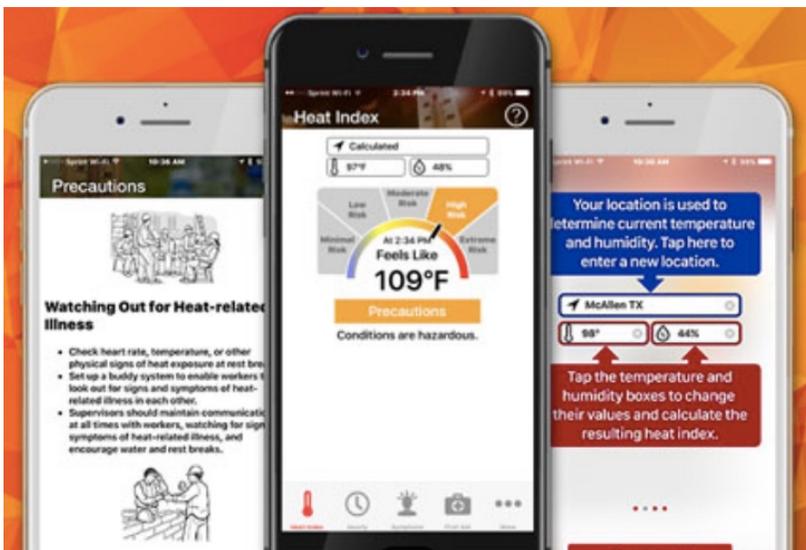


SCP Tribune®

Another Kind of Stress

OSHA's Ship Repair standard, as we recall, tells the Competent Person to make sure workplaces (confined and enclosed spaces...) are safe to enter. Testing air quality is just the start: next we enter workplaces to check for dangers the meter might miss.

And the meter is sure to miss a danger the climate has brought us this past month: HEAT. Record-breaking heat. And this danger is doubled (actually, quadrupled) by 3 things:



TRAINING

Shipyard Competent Person

Full 3-Day Courses

Sep 6-8 @ SSC*

Oct 4-6 @ SSC*

Nov 1-3 @ SSC*

*South Seattle College
Georgetown Campus



1-Day Update Courses

Sep 7 @ SSC*

Sep 13 @ Fremont Maritime

Oct 5 @ SSC*

Oct 11 @ Fremont Maritime

Nov 2 @ SSC*

Nov 8 @ Fremont Maritime



DIRECTIONS:

Fremont Maritime is at Fishermen's Terminal
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 or 1910 provides methods on recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces specific to maritime.

Any Questions? Call 206-932-0206

First, the metal fabrication (welding, cutting, carbon-arc) we do is hot; Second, the PPE our work demands (leathers are SO uncool...) and Third, many work places have poor ventilation.

Actually, there is sometimes another (Fourth) dangerous condition: High Humidity, which makes the first three even worse.

Why is humidity so bad? Because the simple, unpleasant fact is: around heat we humans cannot control our Core Body Temperatures unless we evaporate a bunch of sweat. (Evaporating a pound of sweat sucks 250,000 calories of heat from our bodies!)

And what things make for good sweat evaporation? First, drink a bunch of water so you can make a lot of sweat. Second, provide ventilation. Moving air helps the sweat evaporate. Third, wear light clothing so moving air can get to the sweat. (Sorry about those leathers...)
(Continued on the next page)

Another Kind of Stress, Cont.

Fourth, though you can't control it, low humidity is good. (In high humidity our sweating can't help us because the sweat can't evaporate.)

A few years ago OSHA upgraded its Heat Safety Tool app. This year OSHA teamed up with the CDC to launch a new Heat Safety App for Outdoor Workers. It's easy to use on your smart phones and even comes with full-screen color alerts.

This improved version tells you instantly if heat and humidity puts you in a high-risk zone. The app displays precautions that will help avoid heat stress. The app also gives us important safety information when and where we need it, right on our phones.

More information on preventing heat-related illness is available on CDC's website, where you can find fact sheets, training manuals, community posters, and more in both English and Spanish.



When is Diesel Not Diesel?



Chemists at play

(Continued on the next page)

Years back, a Seattle fishing boat took on diesel from a barge in Dutch Harbor. Upon the vessel's return, a Chemist inerting the day tank for hot work repairs found the tank's airspace semi-explosive! Though it had run the boat's diesel engines, that fuel, laced with gasoline, had to be dumped as waste and the fuel tanks cleaned. But, if the fuel ran the engines, why could it not be kept and used as diesel?

The discussion came down to: "How much gasoline can diesel absorb and still be diesel?"

The short answer? Not very much. But it gets complicated.

When is Diesel, Cont.

“Diesel” has several forms: from coal dust (the fuel that got Mr. Diesel started in the first place), to “arctic” diesel, to traditional Diesel No. 2, to “bio” diesel, to slow-speed diesel (rather like residual “bunker” fuel). But no matter what its form, diesel’s industry specs demand a **FLASH POINT above 130°F**.

Problem is, who has a flash point tester when you need one??

No one. But almost all of us can test for combustible vapor in the air. So, we Marine Chemists got to wondering: Could an ordinary gas-test meter give a barge’s crew a useful, quick-and-dirty idea about the extent of gasoline contamination in diesel?

So we put 10 liters of automotive diesel in a big bottle. Flash point? 149°F. Gassy-ness in the bottle’s airspace read 7% LEL.

As we added regular gasoline milliliter by milliliter, the flashpoint began to dip. Finally, at about 30 mL, the flashpoint dropped below 130°F.

Conclusions? First, the 10 liters contain 10,000 mL. (If you have 10,000 anything, 100 of them make up 1% of the total.)

So, 30mL is only 0.3% of the total and that means even with gasoline contamination far less than 1%, your diesel is no longer diesel.

Second, only 0.3% gasoline boosted the mixture’s combustible gas reading by about 10-12% L.E.L. units. This can be helpful information, because while no barge has a flash point tester, crews can still get real-time information from combustible gas meters. It seems that a modest (say, less than 5 units) rise in a diesel tank’s L.E.L. reading indicates hope the gasoline contamination is so minor that the diesel will still be diesel.

Additional info: It takes a while for those big diesel particles to make their way through a meter’s explosion-proof screen. So, when getting the L.E.L. reading of diesel, be patient. Takes a little more than a minute.

Second, all these measurements are fuzzy. Any combustible gas (L.E.L.) reading depends on the on the oil’s temperature. (A sample of hotter oil is more gassy and so will give a higher L.E.L. reading.) Also, the meter response depends on the gas used to calibrate, and so L.E.L. readings for other fuels will have error. (Using 2 calibrated meters in tandem, we got +/- 35%!)

Congrats to **Joe Greinier of Icicle Seafoods**, July’s Winner.

(Mr. Adam Liu, 2.5 years, randomly picked Joe’s entry. Everything Adam does is random...)
(Honorable mention: Don Preston, Scott Jackson, Mike Santini, Millie Gibson, Dave Johnson, and Alan Davis)

Q: In fish processing, the **SLIME** line removes waste prior to freezing or processing.”

August’s Question:

What does the Mate call that central valve which controls cargo flow among various cargo systems?

Please send your answer to: newsletter@soundtestinginc.com or admin@soundtestinginc.com before August 25.

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