# BE CAREFUL OUT THERE!

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# **DANGEROUS ATMOSPHERES!**



On a log vessel at a New Zealand port, stevedores started entering a full cargo hold immediately after it was opened for discharge. One of them slipped and fell into a gap between logs. Noticing the first man fall and disappear, three others attempted to rescue him. All four stevedores were brought out with great difficulty from narrow spaces between logs four to five meters deep with the help of shore firefighters. They were brought up unconscious almost an hour after the fall. The hospital declared them "dead on arrival".

Logs where the bark has been stripped off are known to be dangerously slippery. Freshly cut logs are also known to deplete oxygen in enclosed spaces. These two factors combined may have been the reason for the deaths.

- Logs are one of several cargoes that have oxygen-depleting properties. Personnel must be adequately warned of the consequences.
- Forced ventilation or adequate natural ventilation must be carried out prior to admitting any personnel into cargo hold carrying logs.

Also, suitable protective clothing and equipment, including appropriate footwear, should be worn.

#### **Oxygen Depleting Cargoes**

A prominent risk while carrying certain cargoes is oxygen depletion due to the inherent form of the cargo. For example, self-heating, oxidation of metals and ores or decomposition of vegetable oils, animal fats, grain and other organic materials or their residues. The materials listed below are known to be capable of causing oxygen depletion. However, the list is not exhaustive. Oxygen depletion may also be caused by other materials of vegetable or animal origin, by flammable or spontaneously combustible materials and by materials with high metal content:

- **Grain**, grain products and residues from grain processing (such as bran, crushed grain, crushed malt or meal), hops, malt husks and spent malt;
- **Oilseeds** as well as products and residues from oilseeds (such as seed expellers, seed cake, oil cake and meal);
- · Copra;
- **Wood** in such forms as packaged timber, round wood logs, pulpwood, props (pit props and other prop wood), wood chips, wood shavings, wood pulp pellets and sawdust;
- Jute, hemp, flax, sisal, kapok, cotton and other vegetable fibers (such as esparto grass/spanish grass, hay, straw, bhusa), empty bags, cotton waste, animal fibers, animal and vegetable fabric, wool waste and rags;
- Fishmeal and fish scrap;
- · Guano;
- Sulphidic ores and ore concentrates;
- Charcoal, coal and coal products;
- Direct reduced iron (DRI);
- Dry ice:
- **Metal wastes and chips**, iron swarf, steel and other turnings, borings, drillings, shavings, filings and cuttings.

#### **Scrap** metal

The atmosphere in any enclosed space may be deficient in oxygen and/or contain flammable and/or toxic gases or vapors. Such an unsafe atmosphere could also subsequently occur in a space previously found to be safe. Unsafe atmospheres may also be present in spaces adjacent to those spaces where a hazard is known to be present.

#### **Conclusion**

Failure to observe simple procedures can lead to people being unexpectedly overcome when entering enclosed spaces. While ship's staff are quite aware of such dangers and observe sufficient precautions, it is also obligatory on the part of the vessel to ensure that cargo holds are well ventilated and the stevedoring company warned of inherent dangers with the cargo carried on board before commencement of cargo work. This obligation is known as the vessels' "turn over duty", and is in place to ensure that longshore personnel are given every opportunity to conduct their work aboard vessels in a safe and healthful manner and that they are provided with full disclosure in relation to any hazards that may be present within the vessel's infrastructure.

Reference: nautinst.org

## What About Atmospheres Within Intermodal Containers?



There are occasions where ILA members of virtually every craft are obliged to enter intermodal containers. Normally, containers having their doors open well in advance of worker entry present no problems associated with atmospheric contamination or oxygen deficiency. Normal ventilation and the flow of air into and around the container will typically serve to dilute any potential contaminants (and bring up insufficient oxygen content) to safe levels.

When planning on entering a container immediately after the doors are opened, for any reason, without the benefit of artificially provided (a fan or blower) or natural ventilation to dilute potential contaminants (and bring up insufficient oxygen levels), start rethinking your plan.....

Entering a newly opened enclosed space can be an activity loaded with danger. Like the shipboard accident set out on the preceding pages, some types of cargoes (or their residues) loaded into containers can literally suck the oxygen right out of the box. Other cargoes (or their residues) can liberate gaseous contaminants that cannot be seen and have no odor, but can yet be the cause debilitating health effects.

Employers and employees have regulatory obligations that arise under the Occupational Safety & Health Act, which are meant to ensure that workers entering such spaces are protected. Here's a link to the regulations that would apply at marine terminals:

https://www.osha.gov/pls/oshaweb/owadisp.show\_document?p\_table=STANDARDS&p\_id=10365

Please take the time to understand these regulations, and to ensure that you take no chances with your own personal safety or that of your fellow workers.

In sum, however, whenever there is a potential for a hazardous atmosphere to exist the employer has an obligation to make tests of the environment into which you are to work within. The employer's representative making those tests must be designated (by virtue of training/experience) and must be appropriately equipped with the correct testing instruments.

### **Need To Be In Touch With An ILA Safety Representative?**

ILA members needing advice, assistance or guidance in considering occupational safety related circumstances and/or issues, should keep in mind that your Union's Safety Representatives are available to consult with.

Mr. George Lynch Tel: 917.797.5812 email: <a href="mailto:glynch@nysailafunds.net">glynch@nysailafunds.net</a> [Located at NY/NJ]

Mr. Bennie Bryan Tel: 912.312.4573 email: <a href="mailto:bbryan1414@yahoo.com">bbryan1414@yahoo.com</a> [Located at Savannah, GA]

Mr. Bob Fiore Tel: 305.798.5845 email: <u>ilabobby@bellsouth.net</u> [Located at Miami, FL]

Whenever a serious accident occurs, or when a hazardous situation requiring a higher level of technical attention or advice is apparent, please be in touch with your Safety Representatives. Your information is valuable, could save a life and may otherwise remain unknown.

