

# Confined Spaces

## Section of Ship Showing Confined Spaces



This material was produced under grant SH-05055-SH8- from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products or organizations imply endorsement by the U.S. Government.

# Topics

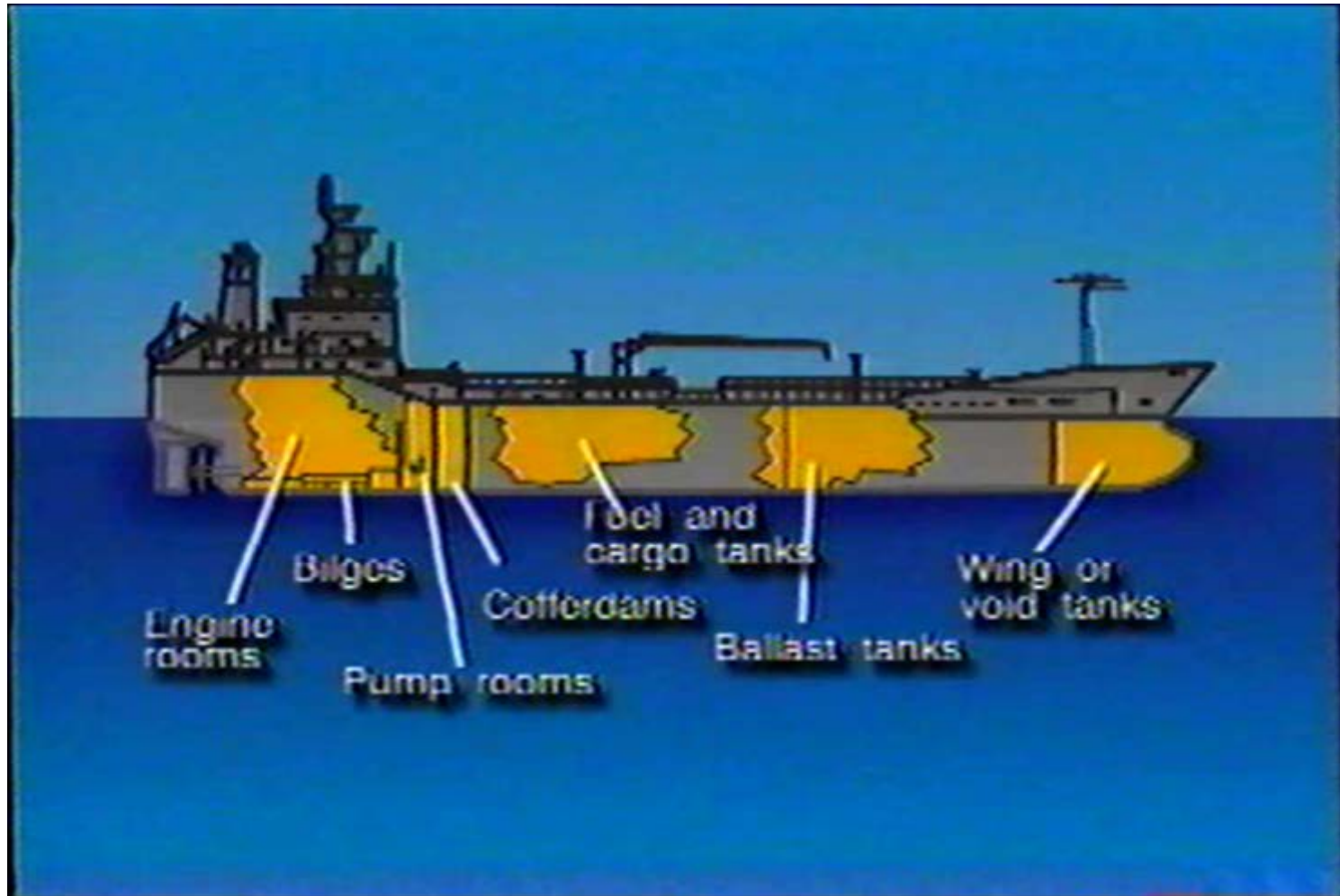
## Confined Space with 17 Inch Entry Hole



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# Common Confined Spaces

## Side of Ship Showing Confined Spaces



# Evaluating Confined Spaces

## Marine Chemist Taking a Reading



# Your Hazards

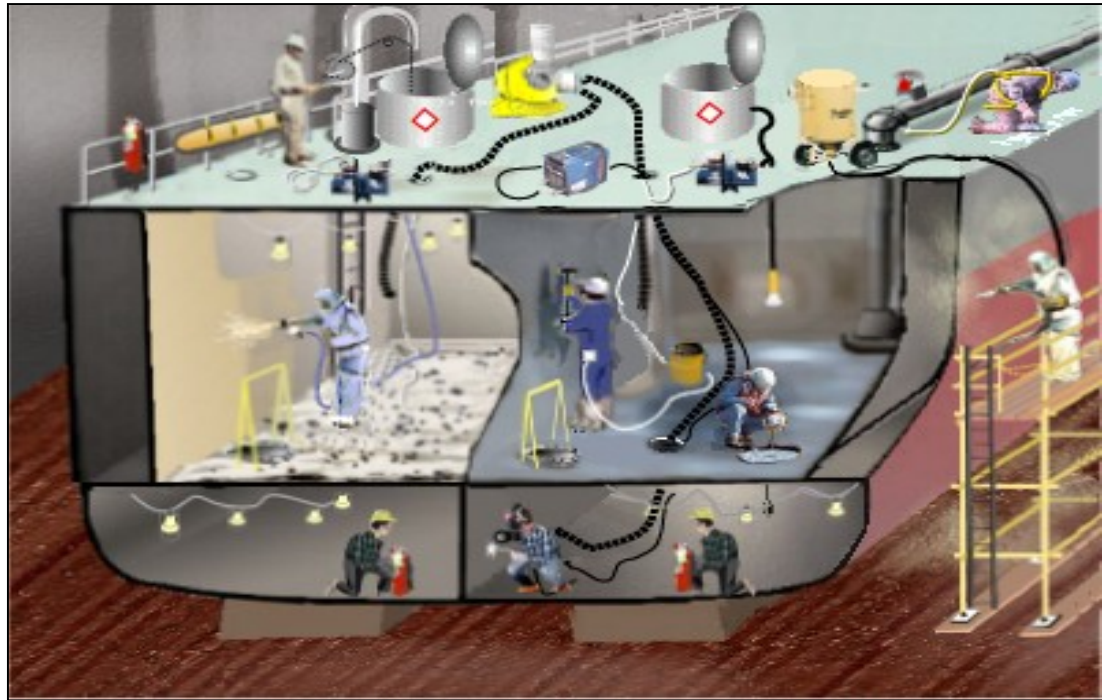
## Navy Vessel on Fire



# Definitions – Adjacent Space

## Section of Ship Showing Confined Spaces

- Adjacent Spaces
- Atmospheric Testing
- Body Harness
- Certified Industrial Hygienists



# Definitions – Competent Person

## Section of Ship Showing Confined Spaces

- Competent Person
- Cold Work
- Confined Space
- Dangerous Atmosphere
- Designated Area



# Definitions – Dilution Ventilation

## Ventilation In Place on a Ship

- Dilution Ventilation
- Enclosed Space
- Enter With Restrictions
- Entry
- Explosion-Proof Lights





# Definitions – Gas Freeing Confined Space Entry Gas Detection Meter

- Gas Freeing
- General Exhaust
- Hazardous Atmosphere



# Definitions – Hotwork

## Shipyards Worker Welding

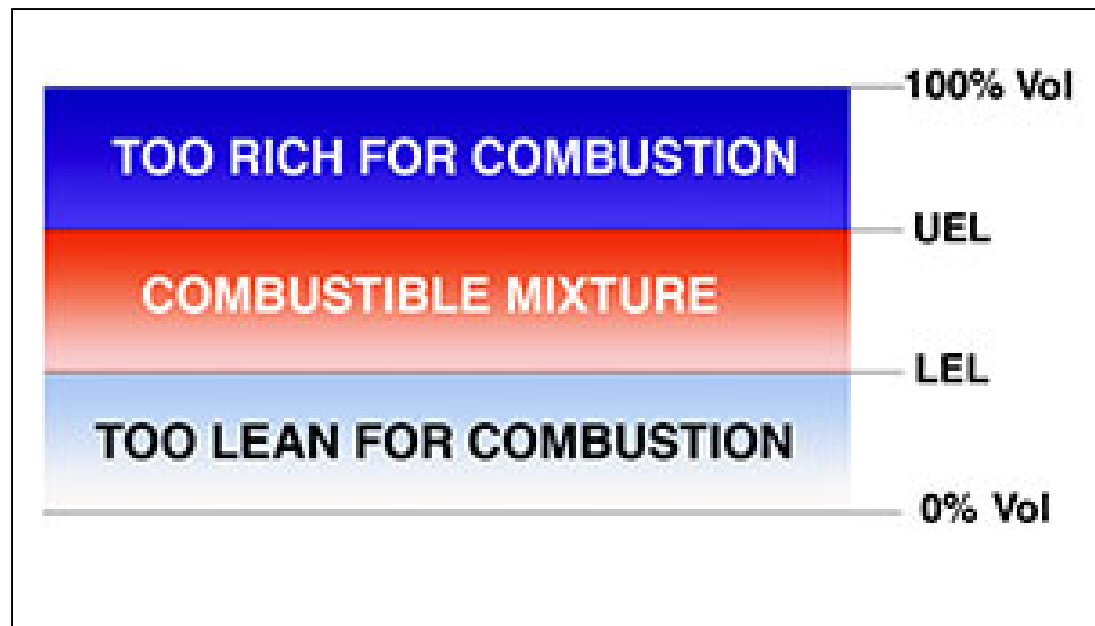
- Hotwork
- IDLH



# Definitions – Inerted Atmosphere

## Oxygen Level Graph

- Inerted Atmosphere
- Local Exhaust
- Lower/Upper Explosive Limit



***Could you unintentionally Inert a Space?***



# Definitions – Space

## Employee With Full PPE Peering Into Space

- Space
- Visual Inspection



# Confined Spaces



QUIZ!

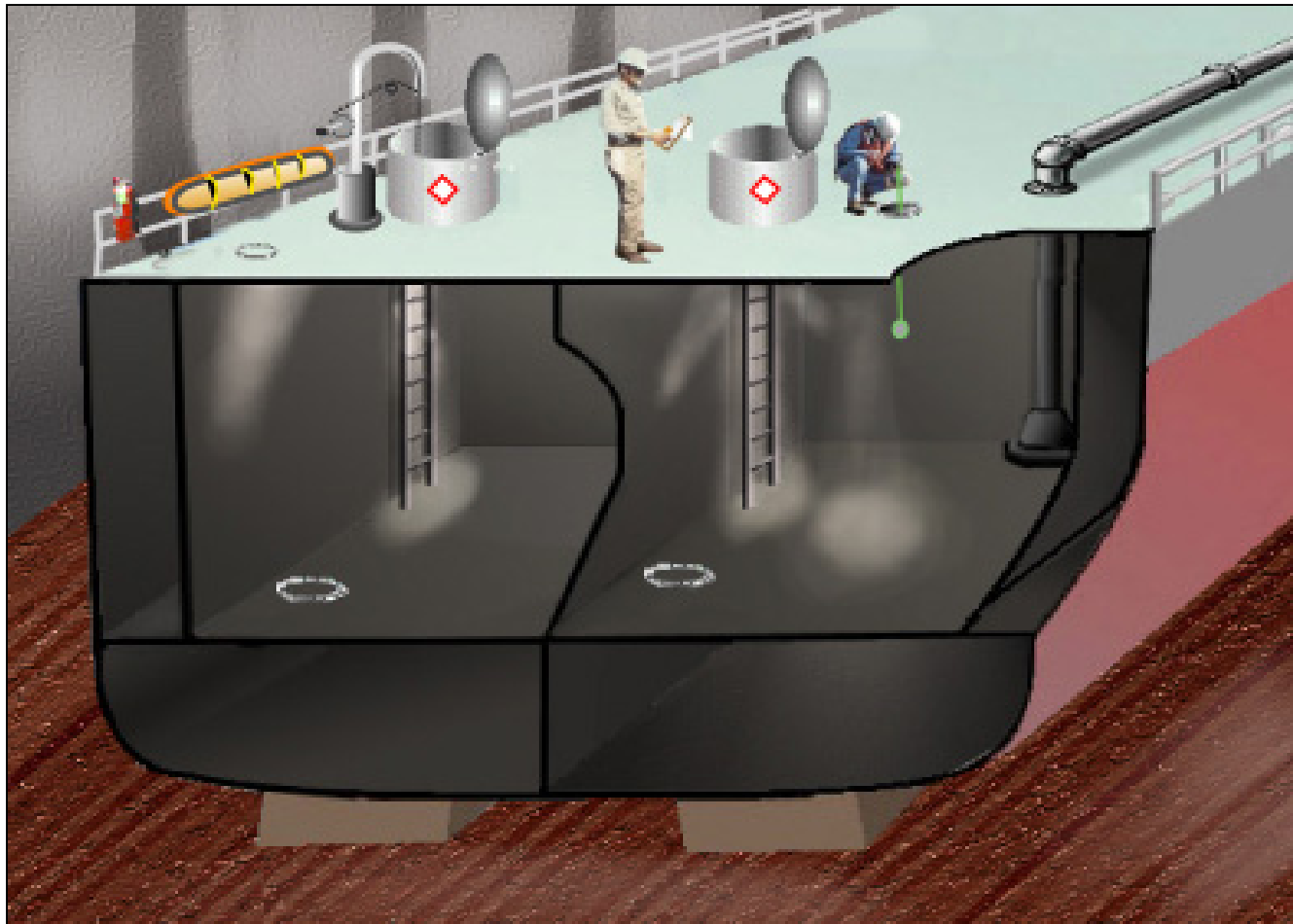
# Oxygen Content

## Worker Testing for Gases and Oxygen



# Visual Inspection

## Worker Writing/Worker Testing Space





# Testing and Pipelines

## Pipe Running Through Space



If valves or piping are leaking

**Leave the space**

# Hot Work-Regulations

## Fuel In Tank Danger Sign



# Record Keeping

## Certification In Plastic Hung at Entrance



# Condition Changes

## Confined Space Entrance With Space Guard



If there is a change in condition while you are in the space, stop hot work and leave the space to report the condition.

**YOU ARE THE MOST IMPORTANT MONITOR OF CONFINED SPACE CONDITIONS.** You work there!



# Confined Space Exercise

Answer one of the two questions.

1. Why could it be safe to do cold work in a confined space but not hot work?

2. What could change that would require a marine chemist or competent person to re-test a confined space?

# Rescue



Confined Space

If you smell any  
**Strong Chemicals**  
or  
**Fuel Vapors**  
**Stop all Hot Work**  
**& Evacuate the Space**

Symptoms of Dangers

# Summary

## Dark Confined Space





# Confined Spaces



QUIZ!