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SMOHIT Safety Sense

Toolbox Talks for the Sheet Metal Industry

Oxyacetylene Safety

- Used properly, oxyacetylene gas is not a significant workplace hazard. However, if used improperly, it has the potential for great destructive power. It is important for the operator of such equipment to be familiar with all its potential dangers.

- Acetylene gas has an explosion range of 2.5 to 80% in the air. This is the widest explosion range of any commonly used gas.

- Many believe that acetylene gas cylinders are hollow - they are not! Acetylene cylinders are packed with diatomaceous earth that is saturated with acetone. Acetone is used in the cylinder as a stabilizing solution for the acetylene.

- Always inspect the gas cylinders, hoses and associated equipment prior to each use. Defective hoses are the most likely places for gas to escape into a room, where any ignition source can cause it to explode.

- Acetylene cylinders should always be handled, stored and used in an upright, vertical position. When cylinders are placed horizontally, they lose liquid acetone from the cylinder, which will clog gauges and ruin hoses.

- Always secure all compressed gas cylinders in an upright position and make sure they can't tip by tying or chaining them upright

- If a cylinder has been tipped over or stored horizontally, stand it upright for at least one hour before using. This will give the acetone a chance to settle.

- Any amount of acetylene gas in an oxygen gauge is an explosive hazard. Acetylene cannot stand the excess of 2,000 pounds of pressure under which oxygen is stored.

- Acetylene cylinder valves should be shut tightly when leaving a job unattended. Be sure the cylinders are stored properly if they are to be left unattended.

Instructor Tips

- **Emphasize the importance of proper training when using oxyacetylene gas.**

- **Describe the construction of an acetylene cylinder using diagrams and/or pictures.**

- **Point out the extreme danger of explosions when improperly using or handling oxyacetylene gas.**

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OSHA Regulations: 1926.350