

Toolbox Talk

30. Gas Welding & Cutting



What?

- Oxy-acetylene welding, commonly referred to as gas welding, is a process which relies on combustion of acetylene enriched with oxygen to produce an extremely hot flame
- In the welding process metals are fused with an oxygen-acetylene mixture concentrated in an intensely hot flame at the end of a torch
- The intensity of the flame melts the edge of the work pieces causing the metal to fuse together to form a solid weld when cooled

Why?

- Gas welding should only be carried out by trained and experienced personnel using the correct equipment, under a hot work permit unless in a purpose-built welding booth
- Oxygen if accidentally released can saturate clothing and cause rapid burning resulting in severe burns. Acetylene is an explosive gas which also needs to be handled carefully. The combined flame emits some UV radiation and therefore general purpose tinted goggles should be used to protect the eyes
- Other protective clothing will be necessary to prevent burns from sparks and molten metal

Do



- ✓ Store gas bottles in a secure manner to prevent them from toppling
- ✓ Check condition of hoses and couplings for signs of damage, excessive wear, loose connections etc.
- ✓ Open cylinder valves using the correct spindle key
- ✓ Make sure there is a fire extinguisher nearby
- ✓ Keep cylinders as far away from the work as possible
- ✓ Use a correct bottle trolley and avoid manual handling of cylinders as much as possible

Don't



- ✗ Forget to use suitable PPE to protect against burns and UV radiation
- ✗ Apply excessive force or oil/grease threads when fitting regulators
- ✗ Use damaged cylinders or other equipment
- ✗ Drop or roll cylinders
- ✗ Leave the valves open when the bottle is not in use
- ✗ Leave trailing hoses for people to trip over



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