

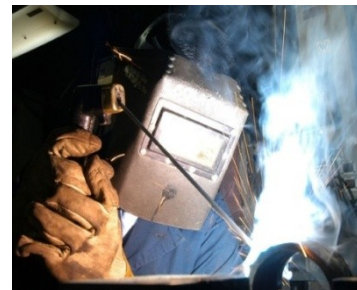
Toolbox Talk

17. Electric Arc Welding



What?

- Arc welding uses power to create an electric arc between an electrode and the base material which heats the metal at the welding point
- The process of arc welding is widely used because it is relatively cheap and can create a strong resilient bond between two pieces of material
- It is normally used in the fabrication of steel structures



Why?

- Incorrect use when arc welding can cause serious injury
- Many common welding procedures involve an open electric arc or flame and therefore the risk of burns is significant
- It also gives off ultraviolet light which can cause inflammation of the cornea and burn the retina of the eye
- There is also the risk of electric shock if the equipment is not properly earthed or connections are not secure

Do



- ✓ Keep area clear of combustible material
- ✓ Ensure that you have a hot work permit
- ✓ Use appropriate PPE to protect against heat and ultraviolet light
- ✓ Ensure you can easily reach the isolation switch
- ✓ Erect non-combustible screens to protect passers-by from radiation
- ✓ Check that secondary leads and connectors are in good condition and properly secured
- ✓ Use extraction systems to contain fumes
- ✓ Have the correct type of fire extinguisher available
- ✓ Check that equipment and material is properly earthed

Don't



- ✗ Forget to use appropriate PPE
- ✗ Change electrodes while standing on wet surfaces
- ✗ Coil cable around your body
- ✗ Leave equipment switched on when not in use



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