Tuesday
15/06/21

Welding Write Workshop

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What is Welding?

Sol^n.

Welding is the metal joining method where in a coalescence is produced either by heating the metal to suitable temperature with or without the use of filler metal.

Types of Welding

1) Arc Welding:

It comprises of those welding processes where source of heat is electricity i.e. coalescence is brought by heating the work piece with an electric arc stuck between and electrode and workpiece

- Shielded arc
- Gas-metal arc
- Gas-Tungsten ~~arc~~
- Submerged arc
- Carbon arc

Shielded arc

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In SMAW coalescence is brought about by heating the workpiece with an electric arc setup between flux coated electrode and the workpiece. The flux covering decomposes due to arc heat and performs a variety of functions like arc stability, weld metal protection etc. The electrode melts and acts as filler metal

Submerged arc Welding

In SAW, welding is done under a blanket of ~~Space~~ flux, such that the arc, the end of electrode and the molten weld pool are submerged in finely divided granulated powder (flux) containing appropriate deoxydizers, cleaners any other fluxing elements

Gas Tungsted arc Welding

In this welding, coalscence is brought about by heating the job with an electric arc struck between a tungsten electrode and the job. An shielding gas (argon or helium) is used to avoid contamination of molten weld pool. The tungsten electrode is non-consu

so a filler metal may or may not be used

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Gas metal arc:-

In mier welding coalescence is alrough about by heating the job with an electric arc established between a continuously fed metal electrode and the job. The arc and molten metal arc shielded by shielding gas

ii) Gas Welding.

It is a fusion melting process. It joins metal using the heat of oxygen/air and a fuel gas mixture (combustion)

Gas welding
- Oxy-acytelene
- Oxy-Hydrogen
- Air acetylene.

Oxy-acytelene

When acytele is mixed with oxygen in correct proposetions in the welding torch and ignited, the flame resulting at the tip of torch is sufficiently hot to melt and join the metal.

Resistance Welding

Resistance welding is a group of welding processes wherein coalescence is brought about by heat obtained from resistance of

the work to the flow of electric current in a circuit of which work is a part and by application of pressure

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- Seam
- Spot
- Percussion
- Flash
- Projection

Welding Equipments

1) AC or DC welding supply
2) Welding Electrode
3) Electrode holder
4) Welding Leads
5) Ground Connection
6) Hand & face Shields

Welding Electrodes

1) Non-consumable (refractory)
   1) Carbon or graphite electrodes
   2) Tungsten electrodes
2) Consumable (Metallic)
   1) Bare electrodes
   2) Flux covered electrodes