

Gas tungsten arc welding uses a consumable steel electrode.

True **False**

A spherical shaped electrode is used when welding with AC in the GTAW process.

**True** False

ACHF stands for alternating current high frequency.

**True** False

Aluminum conducts heat 3 to 5 times faster than steel.

**True** False

Thermal expansion of aluminum is half that of steel.

**True** False

Aluminum alloys are extremely susceptible to porosity

**True** False

The GTAW process is a hydrogen free process.

**True** False

Which of the following is *not* a function of a GTAW torch?

- a. Making electrical connection to the work**
- b. Cooling the electrode
- c. Directing shielding gas
- d. Holding the electrode

What are the correct measurements for shielding gas flow rates?

- a. gallons per hour
- b. liters per minute
- c. cubic feet per hour**
- d. cubic feet per minute

Which of the following currents are to be used for TIG welding aluminum

- a. ACHF**
- b. DCRP
- c. DCSP
- d. DCEP/EN

What is the function of a collet in GTAW

- a. conducts heat away from the tungsten
- b. transfers current to the tungsten
- c. a & b**
- d. none of the above



Which of the following gasses is not used as a shielding gas for GTAW?

- a. argon
- b. carbon dioxide**
- c. helium
- d. argon and helium mixtures
- e. none of the above

What welding current is most commonly used for welding mild steel with GTAW?

- a. DCRP
- b. DCSP**
- c. ACHF
- d. AC

In The PCC Welding shop what type of tungsten is preferred for GTAW of mild steel?

- a. EWTh-2**
- b. EWP
- c. EWTh-1
- d. none of the above

What type of shielding gas is required for GTAW?

- a. Reactive
- b. Inert**
- c. Heavy
- d. All of the above

What determines the type of filler used?

- a. Electrode type
- b. Current choice
- c. Material composition**
- d. All of the above

Which electrode has a red color code?

- a. EWP
- b. EWTh2**
- c. EWth1
- d. EWZr

What effect does thorium have when alloyed with tungsten?

- a. Makes it stronger
- b. Prevents rust
- c. Increases current capacity**
- d. All of the above

What is the purpose of post flow?

- a. To allow the water to cool the torch
- b. To shield the puddle during solidification**
- c. To supply gas prior to establishing a puddle
- d. All of the above

Tungsten is used in GTAW because

- a. it is a good electrical conductor
- b. it has a high melting temperature
- c. it will not contaminate the weld
- d. both a and b**

The tungsten should stick out no farther than which one of the following?

- a. ½ inch (13mm)
- b. the diameter of the cup**
- c. it depends on the metal
- d. it depends on the joint

What does ACHF mean?

- a. Stabilized alternating current**
- b. High fusion Aluminum current
- c. Aluminum coalesced with heat fusion
- d. Alternating current with high fill

Which of the following electrodes would you choose for welding Aluminum.

- a. EWTh2
- b. EWP
- c. EWZr
- d. Both b and c**

The oxide on Aluminum is removed during welding by which of the following currents.

- a. DCRP part of AC**
- b. DCSP part of AC
- c. Both parts of AC
- d. None of the above

The alloy element that provides corrosion resistance in stainless steel is:

- a. Iron
- b. Chromium**
- c. Nickel
- d. Columbium

Which group of stainless steel is magnetic?

- a. Austenitic
- b. Ferritic**
- c. All of the above
- d. None of the above

Which alloy element effects the hardness of stainless steel?

- a. Iron
- b. Carbon
- c. Chromium
- d. Nickel**

Carbide precipitation is the undesirable result of:

- a. Carbon and chromium combining to form carbides**
- b. Iron and carbon combining to form carbides
- c. Cobalt and nickel combining to form carbides
- d. Carbon and nickel combining to form carbides

Black oxides may appear on a stainless weld if

- a. the wrong filler metal is used
- b. too much heat is used when welding**
- c. too short an arc length is used
- d. too small a tungsten is used

The end of the filler rod must be kept close to the weld zone

- a. to keep the rod cool so it does not melt
- b. because it is much easier to see and control
- c. to keep the rod hot so it melts easier
- d. to prevent it from oxidizing**

Why must the shielding gas start flowing before the arc and current are started?

- a. to allow time to position the tungsten before the arc starts
- b. it is used for automatic work only
- c. it is used to remove air from the welding zone**
- d. none of the above

Which current is used for the GTAW root pass for welding carbon steel pipe?

- a. DCEN
- b. DCSP
- c. DC-
- d. All of the above**

When the pipe is fixed in the vertical position the weld joint is

- a. 5G
- b. 6G
- c. 2G**
- d. 1G