

## Marine Engineering Exam Resource – Review of Welding

1. What hand of threads is used on oxygen-acetylene equipment?  
Oxygen is right-handed thread. Acetylene is left handed thread.
2. A 6010 electrode is used for what position in welding?  
60 is the tensile strength. 1 is position. 0 type of current. 1 is all positions, 2 flat and horizontal position, 3 flat only, 4 vertical down only.
3. Why do you not use an acetylene bottle that is laying on its side?  
Acetylene will seep out.
4. The process of heating steel to its lower critical limit and rapidly cooling is called?  
Tempering. Heat treating process that releases internal stress in hardened steel and increases toughness. Tempered steel will not crack under heavy stress or vibration or impact. Should be done as soon after hardening.
5. What is the cause of slag on the edge of the material when you are cutting with a torch?  
Traveling with the cutting torch to fast.
6. Where on the shaft would you put a ground clamp for welding?  
In a position where the current will not pass through a bearing. Balls in ball bearing could arc across to the race and cause high spot or pitting.
7. What determines the pit size of an oxygen-acetylene torch?  
The thickness of the material.
8. What is the maximum safe acetylene pressure at the torch?  
15 psi. Acetylene is unstable when compressed against its self over 15 psi.
9. How much should the valves on oxygen-acetylene tanks be opened?  
Oxygen should be fully opened. Acetylene should be opened ½ turn.
10. If you get a blow back with oxygen- acetylene equipment, which valve do you close first?  
Close Oxygen valve first. This will cut off oxygen to internal flame. Blowback is when flame travels back up hose to tank. Causes are tip to close to metal, incorrect pressure, obstruction in tip.
11. What number on welding rods indicates the tensile strength?  
First two numbers in thousands of lbs. / sq. in. tensile strength.
12. What precautions are used when cutting galvanized steel?  
Need good ventilation.