

"Ask Mister TIG"

Dear Mister TIG: Where is the best place to learn TIG welding from beginner to master? How long should it take to become a proficient welder? Why do you refer to TIG welding on 4130 for "experimental" aircraft only? Can it also be used for certified aircraft?

TIG Welder: The art of TIG welding can be mastered over a period of time. Typically 4-yrs of constant study but you can get pretty descent at perfecting one alloy if you focus. The EAA class is a great way to get started and determine if you have the skills and desire to continue. We also offer a "Basics of TIG Welding" video that is packed with information before you attempt to weld. The TIG process is not exclusive to experimental aircraft, it is used for aerospace , commercial aircraft , and military aircraft. It is more versatile, accurate, and faster than its predecessor "gas welding" and is safe for all weldable alloys such as aluminum, 4130, titanium, inconel and the list goes on and on..... Mister TIG

Dear Mister TIG: I have a very clean tungsten, sanded my base metal, heated so there isn't any moisture, and cleaned my rod and base metal with aluminum cleaner and acetone but am still having problems. The first 1 or 2 dips are fine but then my arc starts to wander and it seems to get very contaminated again. I have increased the hertz and the wandering does go away but still very dirty.

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What size wall thickness would be good for an ATV frame made of 4130 chromoly, they are under a lot of

> stress. Should I use ER80S-D2 or a ER70S-2?

TIG Welder: When welding aluminum, it sounds like you are contaminating your tungsten when you dab the filler material. Sometimes you need to keep the filler out of the hot zone until you see the puddle and then make an aggressive dab. If your dab is too slow then it will oxide or get sucked up into your tungsten. As far as the wall thickness of an ATV, that becomes too vague

**to recommend but you can use ER80S-D2 to be safe.
Good Luck, Mister TIG**

Dear Mister TIG: I would like to know some tricks to rebuild an outboard aluminum impeller with a TIG. Thank you.

TIG Welder: The impeller is usually contaminated badly, but if you preheat to about 200 degrees f. and turn your machine to balanced wave, (if you have a square wave) then you will get allot of cleaning action in the arc. In most cases, you will need ER 5356 filler material for better corrosion resistance. Good Luck, Mister TIG

Dear Mister TIG: I need to know the tig process for welding racecar headers. What filler wire and tungsten is needed in this process?

TIG Welder: We will need to know what type of headers, for example: most street rods are steel but the higher end racing cars are now using a 321 stainless or 625 Inconel. Once we determine the racing type car then we can apply the amount of amps needed which will also determine your tungsten size. Also, to get a good start on the procedures and techniques of TIG welding, you might consider our "Basics of TIG Welding" video/DVD. It is packed with good information and will help you short cut allot of the pitfalls of TIG welding.. Thanks, Mister TIG

Dear Mister TIG: What is the secret to performing sanitary welding on 16 ga. type 304L stainless, besides lots of practice. This is for a TIG welder in our shop who is looking into possible jobs requiring sanitary welds.
> Thanks.

TIG Welder: Welding any stainless steel has some of the same issues. I always recommend using a gas lens set- up for better gas coverage. Argon is also required for a backup gas when welding either tubing or flat plate. Always set the machine on DC- with a pointed tungsten. You might also check out our training video for technique information. Good Luck, Mister TIG

Dear Mister TIG: Can I TIG weld aluminum to metal/galvanized??

TIG Welder: Unfortunately you cannot weld these two

**alloys to each other.... good to hear from you, Mister
TIG**

