

Can my machine weld aluminum?

CAN MY MACHINE WELD ALUMINUM? A considerable amount of our viewers ask about welding aluminum... Do I need AC and a High Frequency box? Well, the answer is no. You can actually weld aluminum with a low cost DC power supply. It doesn't make it any easier and you won't be able to weld very thick materials, (typically 16 gauge maximum), but you can attain a high strength, great looking weld using the DC+ technique. This may also be known as DC Positive....Here is the procedure and technique:

Set your machine on DC+, (in some cases you need to merely reverse the cables). Place your sharpened (to a point) 1/8" diameter -2% thoriated or ceriated tungsten in your torch, set your argon (100%, not a mixture) flow at about 15-20 cfh. Scratch start and maintain a very close arc distance... (if you don't maintain a maximum 1/16" tungsten/ puddle distance you will probably lose the arc). If this happens then re-scratch start... Be very patient as the heat builds up in your part.... These are the characteristics that will happen... **A)** scratch start and maintain an arc **B)** the point on the tungsten will start to ball and then sustain itself.... that's okay... **C)** you will see oxides starting to dissipate because you get half a cleaning cycle when your on DC+. **D)** your puddle will finally form and it is important to visually see the puddle and dab small dabs to maintain control.. **Note: Use 1/16" diameter filler** (maximum). If you contaminate the tungsten then merely regrind to a point.

Welding aluminum is always a difficult task, but if you just have a small project around the house or you want to fix that aluminum water irrigation pipe, then this will work for you and the set-up is less than \$500.00. It works well for material thickness of .020"-.062", and if you are having trouble getting a puddle because your machine doesn't have enough power.. here is an inexpensive technique.... "**pre-heat with a paint stripper electrical gun**"... place the blower gun in the area you would like to weld and leave it there for 5-10 minutes.. Its amazing how the preheat will help you in aluminum welding and remember... "**always use filler material to avoid hot, short cracking**"...

Good luck, **Mister TIG**