

Welding, welders & rust patching

Thanks to the excellent pics and instructions on this web site..... which has provided me with the necessary motivation to give seam welding ago.

Considering i don't know much.....

Which welder do i have to buy/hire?

Arc, Mig, Tig....?

Any advise/comments as always is greatly appreciated.

Cheers

Scott

Just as an example, I purchased a Mig welder (TIG is way too expensive) , It runs a disposable gas bottle as I don't intend to do bulk welding (and hence need to pay rent on a BOC bottle) . It runs to 150 amps and so far been good at aluminum - 5mm, and strut gussets/ anti dive etc.

It seems to be a good handyman or hobby rig at a decent price.

Regards

Albert

Hi Albert,

What make, model, \$\$\$\$, are bottles only made by manufacturer of the welding machine??

MG

I bought a SIP Mig for \$520, the bottles are disposable and \$38 to replace (approx. 15-25min welding) or you use a gas-less flux cored wire.

Wire spools range from \$12 to \$80 depending on the size, weight and type of wire.

Regards

Albert

Hey Albert, was your Mig bought new? I was thinking of buying one for when I start on the body work, but I didn't know you could get them for \$520 - to think I've been putting it off for so long! Do you get a reasonable weld from it?

Thanks, Simon.

The tool shop had a sale on and it was the floor model so I got \$65 off the discount price.

I played with it for a while and did practice welding on a spare strut and I impressed myself after working out the best amperage and wire speed for each job.

Aluminum was good too!

Regards

Albert

How about sheet metal? Thankfully I don't have much in the way of rust repairs to do, but I was thinking of having a go at doing the rear inner arches in preparation for forest flares.

Thanks again, Simon.

I haven't tried sheet metal yet, but I do have some projects in the future, so sorry - no feedback.

Regards

Albert

So what are the limitations of an Arc welder?? As they seem to be fairly cheap.
Cheers

Scott

Stick welding is hard to get amperage low enough so that it doesn't blow holes in thin metal. Distorts metal a lot due to heat and leaves slag on the welds that needs to be chipped off.

MG

I bought a Ryobi Decastar 150E Mig welder from my local hardware shop for \$759 NZ dollars. It also uses the disposable gas bottles but I have used it almost exclusively with 0.8mm flux cored wire. The instructions say you can't weld any material thinner than 1.5mm with the flux cored wire but I have successfully welded 0.8mm sheet steel. It takes practice though. 1mm is easy. Biggest problem is warping from the heat. Used to use an arc. Far too hard. Sticks and blows holes in anything less than 2mm. Mig welding is just like squirting metal.
Cheers

Brian

Scott,
I'd go with everyone else..
From experience a MIG is great for body work(unless you an absolute crafter on a stick...like my old man)...and has a top unit.

**My MIG100 will run 0.6 and 0.8 wire. Its gas and most welding pros advise gas for body work cause flux-core (gassless) is a more brittle weld.

**My bottles are refillable but cost me like \$45 for a fill and \$80 a year rental but hey I've rebuilt 2 cars (cut out rust etc.) in just over a 2years.....so I did a stack of welding...nearly finished.
Don't know much about these disposable ones so maybe someone could enlighten me....may be cheaper for me in future..

**80% of my welding was panel work (thin).

PINTO MK1 and MK2

I am having trouble with body work on my MKI escort.
The metal is too thin and unless I do lap joints I'm blowing straight through, no mater how far down I turn the amps. Any tips. Is TIG the way to go.
You can get small TIG for about \$800 now that run off inverters(cant use this for aluminum)

.... as far as a MIG point of view..
had the same problem with some areas 2.
try tacking a bit of metal behind it first.

If you can't get to it from behind:

**Cut up a piece to go inside and tack a small piece of wire onto it (let the Mig wire itself stick).....you may need 2 piece to inside to cover hole you are patching.

**Then you can use this bit of wire to hold it whilst you tack the pieces in place.

**Snap of the wire and grind joint down if protrudes.

**Then you can weld in the main piece of the metal because these piece you put behind it give you some more thickness.

**You may need to put a nick or 2 in you main piece if the tacks for the back pieces won't allow it to sit flat.

If you can get behind:

**I generally wedge it in place with a cold chisel (not on the part where you weld of course).

**Someone here suggested using a copper drift from behind to hold the bit of build up steel.....I think...

Do a bit each night....that way you prolong the madness (-:

O yeah Steve,

Make sure you do all the basics:

**Clean area with wire wheel...on grinder.....

**Better to cut back the rust and plate a little more, than try and struggle

Scott,

**Electrode....personally thetas hard work but I have seen a little WIA box that a welder mate can do fine stuff with.

**Someone else may be better to answer.

**MIG =

I've got a MIG100 hobby thing, bargain at cashies, probably a throw out job if it goes wrong. does up to 0.9mm wire. Is excellent for panel work/dragging it around w/shop/sticking in boot of car.

Only cost me \$200

not voltage reversible (can't use flux core easily)

A 150 to 200+ will take larger wire and have more grunt for heavier chassis work. Bit less portable, probably take the larger rolls (making wire cheaper overall).

Probably \$400 + unless you find a decent 2nd hand bargain.

Usually voltage reversible (e.g. the work can be set as +ve. or -ve), allowing flux-core(more brittle) or gas (optimum).

Be careful with things like wire feeders and other high usage parts....are spares available??

just make sure its variable enough, mine has various amperage settings to dial it in more.

I've used an oxy to remove guards in the past (e.g. have been soldered on).

You'll probably get to much heat to seam weld, causing the guard to warp/shrink/stretch for an oxy.

An oxy is more for panel manipulation than outright welding of a panel, I find.

PINTO MK1 and MK2

It's not a matter of buying a low amp MIG (Scott) or the ability to be able to just turn the grunt down but with cheap units you cannot vary the grunt via the wire feed and they also do not have a good enough variation on the feed (especially those SIP jobbies!) as I use a German made 175 Migomag and it will weld all the way to .8mm steel with .6mm wire but to do it runs on number 2 with the wire feed down to almost nothing and this is where you notice a better machine as the feed is infinitely adjustable so you can do very fine stitch welds without blowing a hole through and the finish looks similar to Tig but on a smaller machine of a friends this is impossible

Danny

Thanks to all above, seems like i should get a low amp Mig..... an oxy wont do the trick will it?

RM what did you use?

Cheers

Scott

Scott,

Seam welding

The first thing you need to know is that positioning of welding parts is paramount to quality of weld, regardless of welders ability. e.g. Welding upside down is real fun, especially when bits go down sleeves n neck line. So always think gravity on my side! I highly recommend getting one of the welding helmets that darken with the arc. They will improve your welds. I boughtages ago ... see attached. It is not a small welder.

I looked at buying a more portable unit, but at the time I thought they were more of a toy. The duty cycle of them was very low in comparison to bigger units [The measure of use in time that welder will sustain] however things may have changed now. There is an up side on a big welder.....it doesn't get borrowed much!

I tried Mig, arc and Oxy acetylene.

Mig was best but you need to turn it all down real low and be fairly precise with welds to avoid too much build up and then have to grind it off. The arc welder was ok. I have a unit that you change leads on to change voltage so it strikes an arc with lower current. The down side is the slag running everywhere. But a reasonable weld can be done on most of the chassis etc. Oxy was good but way

too slow for me [Braze weld]. I made up this template out of plastic that is flexible and will follow contours of chassis etc. The cut outs are at 60mm?? and 20mm long. This is used to mark along chassis or wherever, with chalk so that the welds are spaced evenly.

When I did my car, I was forced to do it outside on the lawn. If I had a choice I would have liked to do it else where. The car sat nicely on its side. I first tried old tires under its sides, but these were unnecessary. The oxy set came in handy for burning of all the paint n crap though. LPG gas burner will do the same. Incidentally, I got bored and started counting the welds.....stopped at 300.

Welding body panels.

A good weld bloke will try welder out and will proclaim it either a hot welder or cold. This is the ability of the welder to penetrate the metal, or sit on top.

To weld body-steel etc you will need 0.6 Diameter wire. A superior weld will be had without flux cored wire.

You cannot just aim Mig at join and hold it flat for a couple of inches. The metal will become too distorted. The trigger will have to be jockeyed up and down and you will have to move along join and then move back to finish off later. e.g. do a tack and then another some distance down join. Then come back and do some more like this. This spreads the heat out and allows areas to cool etc. I always have a bucket with a rag in water to cool the area frequently. . . I will never weld patch panels in overlap, for fear of moisture getting between pieces, I always butt join.

When I patch [I am thinking door/guard corners here] I use triangles as this means there are less sides to fit up. I have tried a few ways to cut out patches in panels and always come back to the small angle grinder with cutoff wheel. firstly remove paint with 7 inch sander and 36 grit pad. Then I have a selection of mentioned triangles in 1mm steel that i cut up on guilo. I then rummage through them till I find one that covers bad area. I then mark-out with texta and cut out bad area. I then fit patch, by filing or linishing, till it has about a 0.5 mm gap all around. This allows for expansion of patch panel. I use a magnet to hold patch in place, though this [magnetism] always messes with the weld, so only have in there to tack up. Some times you don't need to fully weld patch in, it can be just tacked.

RM in Adelaide

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