SUGGESTIONS FOR WELDING STAINLESS STEEL (CONTINUED)

TIG Welding

In TIG welding, the arc is struck between the work piece and the non-consumable tungsten electrode. The consumable wire is melted in the arc atmosphere and the inert-gases like Argon or Helium or their mixture are used as shielding gases. TIG is extremely suited to join thin sheets, tubes, and making root pass welding in pipes, since the heat input in this process is minimal. TIG welds do not cause any undercuts or excessive penetration and the distortion is lowest compared to any other welding process. TIG welds offer superior quality, but result in low productivity.

SUGGESTIONS FOR WELDING STAINLESS STEEL (START)

SOLID STAINLESSS STEEL CUT LENGTHS & SPOOLED WIRES

MIG Welding

Gas-Metal-Arc welding is generally called MIG (metal inert gas) welding. In this process, the consumable wire travels through a nozzle and a tip before it strikes an arc with the work piece, The arc atmosphere is shielded by gases like:

- 100% argon
- 99% argon with I% oxygen
- 97% argon with 3% carbon dioxide.

MIG welding is a high-productivity process.

MIG welding doesn't need expensive machinery, and the welding machines are easily transportable, making this process very popular on construction sites. In MIG welding, shielding gas, welding parameters, and the consumable assume an important role. Shielding gases are chosen taking quality, cost, and operability into consideration.

In the case of welding with flux cored wires, 100% CO_2 and 75% Argon + 25% CO_2 are used as shielding gases.

FILLER METAL SELECTOR GUIDE FOR STAINLESS STEELS

AISI TYPE NUMBER	442	430F 430 FSE	430 431	501 502	416 418 SE	403 405 410 420 414	321 348 347	317	316L	316	314	310 310S	309 309S	304L	303 303 SE	201 202 301 302 302B 304 305 308	MILD STEEL
	The first number indicates first choice, subsequent numbers indicate second and third choices																
201-202-301 302-302B-304 305-308	310 312 309	310 312 309	310 312 309	310 312 309	309 310 312	309 310 312	308	308	308	308	308	308	308	308	308	308	312 310 309
303 303SE	310 312	310 309 312	310 309 312	3 0 309 312	309 310 312	309 310 312	308	308	308	308	308	308	308	308	312 308-15	308	312 310 309
304L	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	308	308-L	308	308	308	308	308-L	308	308	312 310 309
309 309S	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	317 316 309	316	316	309	309	308	308	308	308	309 310 312
310 310S	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	309	317 316 309	316	316	310	310	309 310	309	309	309	310 309 312
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316	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	316	316	316	309 310 316	310 309 316	309 310 316	309 316	309 316	309 316	309 310 312
316L	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	316 317 308	316L	316	309 310 316	310 309 316	316 309	308 316	308 316	308 316	308 310 312
317	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	317	316 308	316 308	309 310 317	317 316 309	317 316 309	308 316 317	308 316 317	308 316 317	309 310 312
321 348 347	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	347 308	308 347	347 308	347 308	309 310 347	347 308	347 308	347 308-L	347 308	347 308	309 310 312
403-405 410-420 414	310 309 312	310 309 312	310 309 312	310 309 312	309 310	410† 309††	309 310	309 310	309 310	309 310	310 309	310 309	309 310	309 310	309 310	309 310	309 310 312
416 416SE	310 309	310 309	310 309	310	410†	410† 309†† 310††	309 310	309 310 312	309 310 312	309 310 312	309 310 312	310 309 312	309 310 312	309 310 312	309 310 312	309 310 312	309 310 312
501 502	310	310	310	502† 310††	310	310	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 312 309
430 431	310 309	310 309	430 310† 309††	310	310	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309 312
430F 430FSE	310 309	410†	310 309	310 309	310 309 312	310 309 312	309 310 312	309 310 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312
442 446	309 310	309 310 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312

†Preheat ††No Preheat Necessary