


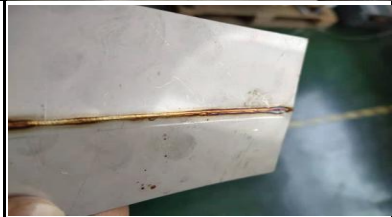




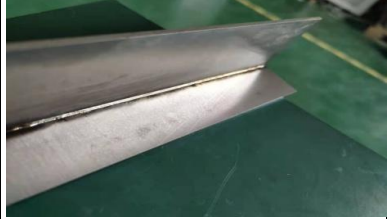







Hand-held welding process parameters






Serial number	Plank	Welding materials and welding methods	Linear process parameters						Sample picture (welding effect picture)
			Laser parameters			Welding gun parameters			
			power (W)	frequency (Hz)	Duty cycle	mode	frequency (Hz)	width (mm)	
1		0.5mm stainless steel internal fillet welding	about 300W	3000-5000	60%-80%	Line type	12-22	1.2-1.8	
2		0.5mm stainless steel positive fillet welding	about 300W	3000-5000	60%-80%	Line type	12-22	1.2-1.8	
3		0.5mm stainless steel diagonal welding	about 300W	3000-5000	60%-80%	Line type	12-22	1.6-2.8	
4		0.5mm stainless steel fillet welding	about 300W	3000-5000	60%-80%	Line type	12-22	1.6-2.8	





不锈钢板

5	1mm stainless steel internal fillet welding	about 450W	3000-5000	100%	Line type	8-16	1.2-1.8	
6	1mm stainless steel positive fillet welding	about 450W	3000-5000	100%	Line type	8-16	1.2-1.8	
7	1mm stainless steel positive fillet welding	about 450W	3000-5000	100%	Line type	8-16	1.6-2.8	
8	1mm stainless steel positive fillet welding	about 450W	3000-5000	100%	Line type	8-16	1.6-2.8	
9	2mm stainless steel internal fillet welding	about 700W	3000-5000	100%	Line type	8-16	1.2-1.8	






10	2mm stainless steel positive fillet welding	about 700W	3000-5000	100%	Line type	8-16	1.2-1.8	
11	2mm stainless steel butt weld	about 700W	3000-5000	100%	Line type	8-16	1.6-2.8	
12	2mm stainless steel fillet welding	about 700W	3000-5000	100%	Line type	8-16	1.6-2.8	
13	4MM stainless steel internal fillet welding	about 1300W	3000-5000	100%	Line type	8-16	1.6-2.8	
14	4MM stainless steel diagonal welding	about 1300W	3000-5000	100%	Line type	8-16	1.6-2.8	


铝板

15	1MM aluminum plate internal fillet welding	about 700W	3000- 5000	100%	Line type	4-12	0.8-1.8	
16	1MM aluminum plate butt welding	about 700W	3000- 5000	100%	Line type	4-12	1.6-2.8	
17	1MM aluminum sheet fillet welding	about 700W	3000- 5000	100%	Line type	4-12	1.6-2.8	
18	2MM aluminum plate internal fillet welding	about 1200W	3000- 5000	100%	Line type	4-12	1.2-1.8	
19	2MM aluminum plate positive fillet welding	about 1200W	3000- 5000	100%	Line type	4-12	1.6-2.8	

20		2MM aluminum plate butt welding	about 1200W	3000- 5000	100%	Line type	4-12	1.6-2.8	
21		1MM carbon steel internal fillet welding	about 450W	3000- 5000	100%	Line type	8-16	1.2-2	
22		1MM carbon steel positive fillet welding	about 450W	3000- 5000	100%	Line type	8-16	1.6-2.8	
23		1MM carbon steel butt fillet welding	about 450W	3000- 5000	100%	Line type	4-16	1.6-2.8	
24		1MM Carbon Steel Tailored Fillet Welding	about 450W	3000- 5000	100%	Line type	8-16	1.6-2.8	

碳钢板

25	2MM carbon steel internal fillet welding	about 700W	3000-5000	100%	Line type	8-16	1.2-2	
26	2MM carbon steel positive fillet welding	about 700W	3000-5000	100%	Line type	8-16	1.6-2.8	
27	2MM Carbon Steel Tailored Fillet Welding	about 700W	3000-5000	100%	Line type	8-16	1.6-2.8	
28	4MM carbon steel internal fillet welding	about 1200W	3000-5000	100%	Line type	8-16	1.2-2	
29	4MM carbon steel positive fillet welding	about 1200W	3000-5000	100%	Line type	8-16	1.6-2.8	

30	4MM Carbon Steel Tailored Fillet Welding	about 1200W	3000-5000	100%	Line type	8-16	1.6-2.8	
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Special note: The above parameters are for reference only.
The parameter changes are mainly adjusted according to the laser power and material welding method and width. The thinner the plate, the lower the power, and vice versa. Under normal circumstances, the laser head control parameter line type is more suitable for butt welding and positive fillet welding, and 0 type is basically suitable for most welding.

Remark:

- ①Adjust the width of the galvanometer swing according to the width of the plate weld.
- ②The power of the laser is proportional to the thickness of the plate. The thicker the plate, the greater the laser power, and vice versa.
- ③The parameters of the thin plate less than 1.0 are different. The duty cycle parameter of the laser is changed according to the degree of the thin plate. The duty cycle parameter mainly affects the penetration strength of the thin plate.
- ④Line type is suitable for most welding, usually suitable for fillet welding and stitching. Welding
- ⑤The applicable range of welding torch frequency is between 4-20, and the power used for different plates can be slightly adjusted.
- ⑥The swing width of the galvanometer for internal angle welding should not be too large. The smaller the moving width, the stronger the energy and the deeper the penetration.