

MICRO-LASER WIRES

Laser welding and hardfacing with filler wire



Selectarc

MICRO-LASER

This welding method used in the automotive, electronics, aeronautics, medical, jewelry... has several advantages:

- Depositing the minimum amount of material without altering the base metal properties,
- No distortion of parts, or too high temperature rises,
- Shiny bead appearance and no heating trace on peripheral areas,
- Seal set guarantee,
- Joining elements of small dimensions,

LOW ALLOYED STEELS : AERONAUTICAL RANGE

Type	Classification	Weld metal composition (%)										0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AFNOR	C	Mn	Si	Cr	Ni	Mo	S	P	V					
■ SELECTARC SCVS	15 CDV6	<0.15	1.0	<0.2	1.40	-	0.90	<0.020	<0.020	0.25	Balance	x	x	x	x	x
■ SELECTARC F66S	25CD4	<0.25	0.6	0.25	1.0	<0.3	0.23	<0.020	<0.020	-	Balance	x	x	x	x	x

STAINLESS STEELS

Type	Classification	Weld metal composition (%)									0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AWS A5.9	C	Mn	Si	Cr	Ni	Mo	V	Fe					
■ SELECTARC 20/10	ER308 L	<0.03	1.75	<0.6	20	10	-	-	Balance	x	x	x	x	x	
■ SELECTARC 29/9	ER312	0.12	1.75	<0.6	30	9.5	-	-	Balance	x	x	x	x	x	
■ SELECTARC 20/10M	ER316 L	<0.03	1.75	<0.6	19	13.5	2.5	-	Balance	x	x	x	x	x	
■ SELECTARC M13/0	ER410	<0.10	0.55	<0.6	13	-	-	-	Balance	x	x	x	x	x	
■ SELECTARC F17/0	ER430	<0.10	<1.00	<0.75	17	-	-	-	Balance	x	x	x	x	x	
■ SELECTARC 11/3M	-	0.12	0.7	0.5	12	3	1.5	0.3	Balance	x	x	x	x	x	
■ SELECTARC M13/0C	ER420	0.3	0.55	<0.6	13	-	-	-	Balance	x	x	x	x	x	

NICKEL ALLOYS

Type	Classification	Weld metal composition (%)										0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AWS A5.14	C	Si	Mn	Cr	Mo	Fe	Nb	P	S					
■ SELECTARC Ni625	ERNiCrMo-3	0.01	0.15	0.1	22.0	8.7	0.3	3.6	<0.01	<0.01	Balance	x	x	x	x	x



All types of grades can be studied on request, please contact us!

Many metallic grades can be welded by laser micro-process: carbon steel, stainless steel, nickel base, aluminium alloys, titanium alloys...

- This highly specialized process allows deposits with the same or higher characteristics than the original ones.

THE MICRO-LASER FILLER METAL RANGE IS AVAILABLE IN :

- 1m rods packed by 50 rods boxes,
- 330 mm rods packed by 150 rods,
- 50 meter spools on D100,
- Diameter range from 0,2 mm to 0,6 mm.



ALUMINIUM ALLOYS

Type	Classification	Weld metal composition (%)								0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AWS A5.10	Mn	Fe	Si	Mg	Al	Zn	Cr					
■ SELECTARC ALG5	ER5356	0.15	0.4	0.2	4.7	Balance	<0.1	0.15	0.15	x	x	x	x	x
■ SELECTARC ALS5	ER4043	-	0.4	5.2	-	Balance	<0.1	-	-	x	x	x	x	x
■ SELECTARC ALS7	R-357.0	-	0.1	7	0.55	Balance	-	-	0.1	x	x	x	x	x
■ SELECTARC ALS12	ER4047	0.1	0.5	12	-	Balance	<0.1	-	-	x	x	x	x	x

COPPER ALLOYS

Type	Classification	Weld metal composition (%)			0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		ISO 24373	Cu	Ag					
■ SELECTARC CUAG	CuAg1	98.5	1		x	x	x	x	x

TITANIUM ALLOYS

Type	Classification	Weld metal composition (%)						0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AWS A5.16 / AMS	C	N	H	O	Fe					
■ SELECTARC T40	ERTI-2 / 4951	<0.05	<0.02	<0.008	<0.10	<0.20	Balance	x	x	x	x	x

COBALT ALLOYS

Type	Classification	Weld metal composition (%)								0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)
		AMS	Fe	Cr	Ni	W	Co	Si	Mn					
■ SELECTARC FICO25	5796	<3	20	10	15	Balance	1	1.5		x	x	x	x	x

HARDFACING FOR EQUIPMENT

Type	Hardness (HRC)	Weld metal composition (%)													0.2 (mm)	0.3 (mm)	0.4 (mm)	0.5 (mm)	0.6 (mm)	
		C	Si	Mn	Cr	Ni	Mo	Al	Co	Ti	V	W	P	S						Fe
■ SELECTARC 819 BS	~48	0.35	0.3	0.4	1.7	3.8	0.3	-	-	-	-	-	<0.015	<0.010	Balance	x	x	x	x	x
■ SELECTARC BMS	~36	0.06	0.7	1.1	2.7	-	1.0	-	-	-	-	-	<0.015	<0.015	Balance	x	x	x	x	x
■ SELECTARC MV5S	60	0.5	-	-	5.0	-	1.3	-	-	-	0.4	1.3	-	-	Balance	x	x	x	x	x
■ SELECTARC MARVAL 18S	~35 / ~50	<0.01	<0.1	<0.1	-	18.0	5.0	0.1	8.5	0.5	-	-	-	-	Balance	x	x	x	x	x
■ SELECTARC SMV3S	~58	0.38	0.9	0.3	5.0	-	1.3	-	-	-	0.5	-	-	-	Balance	x	x	x	x	x
■ SELECTARC HBF17	~53	0.4	0.5	0.4	16.5	-	1.1	-	-	-	-	-	-	-	Balance	x	x	x	x	x

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