

Appendix

	Molybdenum, tungsten	Ni-alloys	Nickel	Sn-bronzes	Si-bronzes	Nickel silver NS 47-65	CuNi-alloys	Brass Ms 56-67	Brass Ms 72-90	Copper	Aluminum and Al-alloys	Cadmium-plated steel sheet	Tin-plated steel sheet	Stainless steel	Cold-rolled steel
Cold-rolled steel	D 2 2 c	D 2 2 c	D 2 2 c	D 2 2 c	D 2 2 c	E 2 2 c	E 2 2 c	E 2 2 cd	F 2 2 cd	F 8 2 cd	F 0f 2 cd	C 2f 2	C 2f 2	B 2g 2	A 2 2 a
Stainless steel	D 2 2g	D 2 2 eb	D 2 2	E 2 2	E 2 2	E 2 2 b	E 2 2	F 2 2	F 8 2	F 8 2 cd		C 2f 2	C 2f 2	A 23 23 q	
Tin-plated steel sheet	E 2 2 i	D 2 2 ci	D 2 2	E 2 2	E 2 2	E 2 2	E 2 2	F 2 2 f	F 8 2 f	F 8 2 cd		D 2f 2 i	D 2 2 fi		
Cadmium-plated steel sheet	E 2 2 i	D 2 2 c	D 2 2 i	E 2 2	E 2 2	E 2 2 b	E 2 2 b	F 2 2	F 8 2	F 8 2		C 2 2 fi			
Aluminum and Al-alloys				D 2 0	D 2 0 egf					E 8 0 bf	D 0 0 fg				
Copper		E 2 8	E 2 8 c	D 2 8 f	D 2 8 f	D 2 8 f	D 2 8 f	D 2 8 f	E 2 8 f	E 8 8 b					
Brass Ms 72-90		D 2 8 f	D 2 8 f	D 2 8 f	D 2 8 f	D 2 8 f	D 2 8 f	E 2 2 f	E 2 2 ef						
Brass Ms 56-67		D 2 2 f	D 2 2	C 2 2 a	C 2 2 d	C 2 2	C 2 2 a								
CuNi-alloys		C 2 2	C 2 2	C 2 2	C 2 2	C 2 2	C 2 2 a								
Nickel silver NS 47-65		C 2 2	C 2 2	C 2 2 a	C 2 2 a	B 2 2 a									
Si-bronzes		C 2 2	D 2 2	C 2 2 a	B 2 2 a										
Sn-bronzes		D 2 2	D 2 2	B 2 2 a											
Nickel	D 2 2 eb	C 2 2	B 2 2 a												
Ni-alloys	D 2 2 eb	B 2 2 a													
Molybdenum, tungsten	D 7f 7f be														

Weldability:
 A Excellent
 B Very good
 C Good
 D Average
 E Poor
 F Very poor
 G Unsuitable

Key to abbreviations in the boxes:

a	b
c	d

 Box a Weldability
 Box b Electrode material on metal in top row
 Box c Electrode material on metal in left column
 Box d Special remarks

Special remarks:

- a Strength of the weld is good
- b Can be welded under special conditions
- c Strength of the weld is poor
- d No actual weld nugget present, only "sticking"
- e Welding conditions must be closely monitored
- f Keep electrodes clean to prevent sticking to workpiece
- g Experience shows that cleaning of the metal surface before welding is beneficial
- h Use flat electrode to reduce deformation or discoloration
- i Coating may be dissolved in the other metals or may burn off

Selection of electrode materials

Code	Electrode material	Application
0	E-Cu cold-rolled or forged	Light alloys, non-ferrous metals
1		
2	CuCr, CuZr, CuCrZr, Elmedur, Wirbalit HF	Bright and clad steels, brass, nickel silver, bronzes, nickel and Ni-alloys
3	CuCoBe, Elmet HA, Wirbalit B	High-alloy steels, NiCr-alloys Monel
4		
5		
6	CuW, CuWAg, Elmet H3, Wirbalit KW 80	Non-ferrous metals
7	W (Tungsten)	Copper, silver, resistance brazing solder, hot riveting
8	Mo (Molybdenum)	Copper, silver
9		