

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
S 19 12 3 Nb	ER318

Characteristics and typical fields of application

Solid wire of G 19 12 3 Nb Si / ER318 (mod.) type for joining and surfacing application with matching and similar stabilized and non-stabilized austenitic CrNi(N) and CrNiMo(N)-steels and cast steel grades. Corrosion resistance similar to matching stabilized CrNiMo-steels. Resistant to intergranular and wet corrosion up to 400°C. Applicable for service temperatures down to -120°C.

Recommended SAW flux:

Marathon 213
 Marathon 431

Base materials

1.4401 X5CrNiMo17-12-2, 1.4404 X2CrNiMo17-12-2, 1.4409 GX2CrNiMo19-11-2, 1.4435 X2CrNiMo18-14-3, 1.4436 X3CrNiMo17-13-3, 1.4437 GX6CrNiMo18-12, 1.4571 X6CrNiMoTi17-12-2, 1.4580 X6CrNiMoNb17-12-2, 1.4581 GX5CrNiMoNb19-11-2, 1.4583 X10CrNiMoNb18-12
 UNS S31600, S31603, S31635, S31640, S31653, AISI 316, 316L, 316Ti, 316Cb

Typical analysis

	C	Si	Mn	Cr	Ni	Mo	Nb
wt.-%	0.04	0.40	1.8	19.5	11.5	2.6	0.6

Operating data

Dimension mm	Current A	Voltage V
2.4	300 – 400	29 – 33
3.2	350 – 500	29 – 33
4.0	425 – 575	30 – 34

Suggested heat input max. 1.5 kJ/mm and interpass temperature max. 100°C. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.

Approvals

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