TIG CO21

Classification

AWS A5.21 : ERCoCr-E EN 14700 : S Co1
DIN 8555 : WSG-20-GZ-300-CKTZ

Description & Applications

Cobalt base solid rod for TIG or oxyfuel harfacing of Stellite™ Grade 21*. Good metal-metal wear and oxidation resistance up to 1000°C, even in presence of sulphurous atmosphere. Good behaviour to important thermal and mechanical shocks, excellent resistance to cracks, highly resistant to cavitation and erosion, deposit non-magnetic.

Main applications: Surfacing of motor valves, gas turbine blades, extrusion nozzles, forging dies, forging tools, mixers, and valves for gas/water/vapour/acids.

* Trademark Kennametal

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Fe	W	Nb	P	S	A/T	Co
Min	0.15		0.1	25	1.5	4.5							
Max	0.45	1.5	1.5	30	4.0	7.0	3.0	0.50	1	0.03	0.03	0.50	Rem.
Type	0.25	0.60	0.30	27.8	2.4	5.4	1.4	0.01	0.01	0.02	0.01	<0.50	Rem.

All Weld Metal Mechanical Properties

	Hardness (HRC)		
Temperature (°C)	+20°C	600°C	Work hardening
Type	29-33	~20	~42

Welding Current & Instructions

Welding mode	Shielding Gas
TIG = -	ISO 14175 : I1 (Ar) 6-12 L/min

Preheat large components or special steels to 200-400°C. Keep this temperature during welding and cool down slowly, preferable in an oven, to reduce the risk of cracking while cooling.