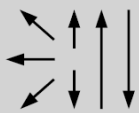


Classifications					
EN ISO 14343-A		EN ISO 14343-B		AWS A5.9	
G 13		SS(410)		ER410 (mod.)	
Characteristics and typical fields of application					
GMAW solid wire of type G 13 / ER 410 (mod.) predominantly used for surfacing of sealing faces of valves for gas, water, and steam piping systems at service temperatures up to +450 °C. The machinability of the weld metal depends largely upon the kind of base metal and degree of dilution. Joint welding of similar 13 % chromium steels shows matching colour of the weld metal and very good ability to polishing. Good feeding, welding and wetting characteristics.					
Base materials					
Surfacings: all weld able substrates, unalloyed and low-alloyed					
Joint welds: corrosion resistant Cr-steels as well as other similar-alloyed steels with C-contents ≤ 0.20 % (repair welding); heat resistant Cr-steels of similar chemical composition. Be careful with dilution and welding technology. 1.4006 X12Cr13, 1.4021 X20Cr13 AISI 410, 420					
Typical analysis of solid wire (wt.-%)					
	C	Si	Mn	Cr	
wt.-%	0.06	0.7	0.6	13.6	
Mechanical properties of all-weld metal					
Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V KV J	Brinell-hardness
	MPa	MPa	%	+20 °C	HB
u					320
a	≥ 250	≥ 450	≥ 15		200
u untreated, as welded – shielding gas Ar + 8 – 10 % CO ₂ a annealed, 720 °C/2 h – shielding gas Ar + 8 – 10 % CO ₂ The hardness of the deposit is greatly influenced by the degree of dilution with the base metal (depending on the relevant welding conditions) and by its chemical composition. As a general rule it can be observed that the higher the degree of dilution and the C-content of the base metal, the higher the deposit hardness. Gas mixtures containing CO ₂ result in higher deposit hardness than CO ₂ -free gas mixtures.					
Operating data					
	Polarity: DC (+)	Shielding gases: Argon + 8 – 10 % CO ₂ (Argon + 3 % O ₂ or max. 5 % CO ₂ (shielding gas depends on the application)			ø (mm) 1.2 1.6
For joint welding preheating to +200 – 300 °C is recommended. Tempering at +700 – 750 °C to increase toughness.					
Approvals					
SEPROZ					