

M-420

For martensite stainless steel (12%Cr STS)

Classifications

EN ISO 14343-B:2009	: SS 420
AWS A5.9-2012	: ER420
JIS Z 3321:2013	: YS420

Description

- MIG welding of 12%Cr martensite stainless steels (AISI 420)
- It is used for surfacing of sealing faces of valves for gas, water and steam piping system at service temperature up to 450°C

Welding positions



Polarity & shielding gas

- DCEP (DC+)
- Ar + 1-3% O₂ (15 – 25 l/min)
- Ar + 1-5% CO₂ (15 – 25 l/min)

Typical chemical composition of all-weld metal (%)

C	Si	Mn	Ni	Cr
0.33	0.39	0.40	0.16	12.56

Typical mechanical properties of all-weld metal

	Yield Strength	Tensile Strength	Elongation	Remark
	(MPa)	(MPa)	(%)	
EN ISO 14343	Min. 250	Min. 450	Min. 15	PWHT
Example	310	510	20	

*PWHT: Heat to 840-870°C for 2 hours. Furnace cooling down to 600°C, then air cooling