

Classifications

EN ISO 636-A -	AWS A5.28 / SFA-5.28
W 46 10 W0	ER80S-G

Characteristics and typical fields of application

Low alloyed filler metal for GTAW-welding of cold –tough fine-grained structural steels up to S240. Superb impact strength at low temperatures down to -100 °C.

Base materials

Low temperature steel grades and fine grained Ni alloyed steels:
 12Ni14, X12Ni5, 13MnNi6-3, 15NiMn6, S275N-S420N, S275NL-S420NL, S275M-S420M,
 S275ML-S420ML, P275NL1-P420NL1, P275NL2-P420NL2
 ASTM A 633 Gr. E; A 572 Gr. 65; A 203 Gr. D; A 333 und A 334 Gr. 3; A 350 Gr. LF3

Typical analysis

	C	Si	Mn	Ni
wt.-%	0.07	0.15	0.9	3.3


Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength	Tensile strength	Elongation A	Impact energy ISO-V KV J		Hardness
	R _{p0.2}	R _m	(L ₀ =5d ₀)	20°C	-100°C	
	MPa	MPa	%			HB
u	440 (≥400)	540 (≥500)	25 (≥ 20)	180 (≥ 47)	47 (≥ 32)	-
s	430 (≥400)	520 (≥500)	28 (≥ 20)	220 (≥ 47)	70 (≥ 47)	< 200

u untreated, as welded - shielding gas 100% Ar

s heat treated 580°C / 4 h

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1	2.4 × 1000
	Rod marking	+ I3,5Ni / ER80S-Ni3mod.	

Preheat temperature 100 – 150°C

Approvals

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