

Low alloy solid wire

Classification

AWS A5.28-96	: ER80S-Ni 1 (GTAW) / ER80S-Ni 1 (GMAW)
EN 1668-97	: W 42 6 W3Ni1
EN 440-94	: G 46 5 MG3Ni1

General description

Solid wire for welding fine grained steel and low alloyed nickel steels

High impact value at low temperature (-60°C)

Typical offshore applications

Stable arc and excellent feedability

Shielding gases (acc. EN 439)

GTAW	I1	Inert gas Ar (100%)
GMAW	M21	Mixed gas Ar+ >5 to 25% CO ₂

Approvals

	CTL	DB	GL	TÜV
GTAW	+		4Y42	+
GMAW		+		+

Chemical composition (w%), typical, wire / rod

C	Mn	Si	Ni
0.09	1.2	0.6	0.9

Mechanical properties, typical, all weld metal

	Process	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) -60°C
Typical values	GTAW	I1	AW	480	560	24	80
	GMAW	M21	AW	480	580	31	60

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S275, S355
Ship plates	ASTM A131	Grade A, B, D, E, AH32 to EH36
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L290 GA, L360GA
	EN 10208-2	L290, L360, L415
	API 5LX	X42, X46, X52, X60
	EN 10216-1	P275T1
	EN 10217-1	P275 T2, P355 N
Fine grained steel	EN 10113-2	S275, S355, S420
	EN 10113-3	S274, S355, S420

Packaging

Process	Unit	Sizes (mm)						
		0.8	1.0	1.2	1.6	2.0	2.4	
GTAW	2 and 5 kg tube					X	X	X
GMAW	15 kg spool B300	X	X	X				
GMAW	5 kg spool S200		X					

Other sizes and packaging on request