

Classifications			
EN ISO 16834-A	EN ISO 16834-B	AWS A5.28	AWS A5.28M
G 55 6 M21 Mn3Ni1Mo	G 62A 6 M21 3M1 N2M2T	ER90S-G	ER62S-G
G 55 4 C1 Mn3Ni1Mo	G 626A 4 C1 3M1 N2M2T		

Characteristics and typical fields of application

Copper coated GMAW wire for high strength, quenched and tempered fine-grained constructional steels. The wire is suited for joint welding in boiler, pressure vessel, pipeline, and crane construction as well as in structural steel engineering. The typical composition of the wire fulfils the requirements of the NORSOK- regulation for "water injection systems". Due to the precise addition of micro alloying elements NiMo 1-IG wire features excellent ductility and crack resistance in spite of its high strength. Good cryogenic impact energy down to $-60\text{ }^{\circ}\text{C}$, low hydrogen contents in the deposit, best feed ability and a low copper content.

Base materials

Fine-grained steels and quenched and tempered fine-grained steels
 S460N, S460M, S460NL, S460ML, S460Q-S555Q, S460QL-S550QL, S460QL1-S550QL1, 460N,P460NH, P460NL1, P460NL2, L415NB, L415MB-L555MB, L415QB-L555QB, alform 500 M, 550 M, aldur 500 Q, 500 QL, 500 QL1, aldur 550 Q, 550 QL, 550 QL1, 20MnMoNi4-5, 15NiCuMoNb5-6-4
 ASTM A 572 Gr. 65; A 633 Gr. E; A 738 Gr. A; A 852; API 5 L X60, X65, X70, X80, X60Q, X65Q, X70Q, X80Q

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Mo	Ni
wt.-%	0.08	0.6	1.8	0.3	0.9

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		
	MPa	MPa	%	+20 °C	-40 °C	-60 °C
u	620 (≥ 550)	700 (640 – 820)	23 (≥ 18)	140	110	≥ 47
u2	590	680 (620 – 770)	22 (≥ 20)	120 (≥ 100)	≥ 47	

u untreated, as welded – shielding gas Ar + 15 – 25 % CO₂

u2 untreated, as welded – shielding gas 100 % CO₂

Operating data

	Polarity:	Shielding gases:	ø (mm)
	DC (+)	Argon + 15 – 25 % CO ₂ Argon + 0 – 5 % CO ₂ + 3 – 10 % O ₂ 100 % CO ₂	0.9 1.0 1.2

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (11763.), DB (42.014.06), GL (4Y55S), SEPROZ, NAKS (1,2 mm), Gazprom (1,2 mm), CE, VG 95132