

## Classifications

EN ISO 16834-A	EN ISO 16834-B	AWS A5.28	AWS A5.28M
G 89 6 M21 Mn4Ni2CrMo	G 83A 6 M21 N4M4T	ER120S-G	ER83S-G

## Characteristics and typical fields of application

GMAW wire for the welding of higher-strength, heat treated, fine-grained constructional steels with a minimum yield strength of 890 MPa.

Due to the precise addition of micro-alloying elements X 90-IG wire features excellent ductility and crack resistance in spite of its high strength.

Good cryogenic impact energy down to  $-60^{\circ}\text{C}$ .

## Base materials

High-strength fine-grained steels

S890Q, S890QL, alform® 900 x-treme, alform® plate 900 M x-treme, alform® 960 x-treme, alform® plate 960 M x-treme

ASTM A 709 Gr. 100 Type B, E, F, H, Q, HPS 100W

## Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Ni	Mo
wt-%	0.1	0.8	1.8	0.35	2.25	0.6

## 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	
	MPa	MPa	%	+20 °C	-60 °C
u	<b>915</b> ( $\geq 890$ )	<b>960</b> ( $\geq 940 - 1180$ )	<b>20</b> ( $\geq 15$ )	<b>130</b>	$\geq 47$

u untreated, as welded – shielding gas Ar + 15 – 25 % CO<sub>2</sub>

## Operating data

	<b>Polarity:</b> DC ( + )	<b>Shielding gases:</b> Argon + 15 – 25 % CO <sub>2</sub>	<b>ø (mm)</b>
			1.0
			1.2

Preheating and interpass temperature as required by the base metal.

## Approvals

TÜV (5611.), DB (42.014.23), GL (6Y89S), SEPROZ, CE