

## Classifications

EN ISO 21952-A	EN ISO 21952-B	AWS A5.28	Mat. No.
G CrMo91	G 62 M12 9C1MV	ER90S-B9	1.4903

## Characteristics and typical fields of application

High temperature resistant, resistant to scaling up to 600 °C (1112 °F). Suited for joining and surfacing applications with quenched and tempered 9% Cr steels, particularly for matching high temperature resistant parent metal T91 / P91 according to ASTM.

## Base materials

1.4903 – X10CrMoVNb9-1;  
ASTM A 199 Gr. T91; A 355 Gr. P91 (T91); A 213/213M Gr. T91

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

	C	Si	Mn	Cr	Mo	Ni	Nb	V
wt-%	0.1	0.3	0.5	9.0	1.0	0.5	0.06	0.2

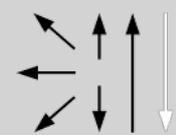
**Structure:** Martensite, suitable for quenching and tempering

## Mechanical properties of all-weld metal

Heat-treatment	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J
	MPa	MPa	MPa	J
760 °C / 2 h	520	620	16	50

**Creep rupture properties:** According to matching high temperature resistant parent metal

## Operating data

	<b>Polarity:</b> DC ( + )	<b>Shielding gas:</b> (EN ISO 14175) M12, (M13)	<b>ø mm</b> 1.0 1.2	<b>Spool:</b> B300 B300
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## Welding instruction

Materials	Preheating	Cooling	Postweld heat treatment
Matching steels / cast steel grades	200 – 250 °C / 200 – 300 °C	≤ 100 °C	Tempering at (760 °C / 2 h)