merian®

BÖHLER A 7-IG, A 7 CN-IG

Solid wire, high-alloyed, special applications

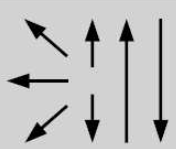| Classifications	
EN ISO 14343-A	**AWS A5.9**
G 18 8 Mn	ER307 (mod.)

Characteristics and typical fields of application

GMAW wire of type G 18 8 Mn / ER307 for numerous applications.

The weld metal offers exceptionally high ductility and elongation together with outstanding crack resistance. There is no fear of embrittlement when operating down to service temperatures of –110 °C or above +500 °C. The scaling resistance goes up to +850 °C. When working at service temperatures above +650 °C please contact the supplier.

The weld metal can be post weld heat treated without any problems. The deposit will work harden and offers good resistance against cavitation. Ductility is good even after high dilution when welding problem steels or when subjected to thermal shock or scaling. An excellent alloy providing cost effective performance.

Very good feeding, welding and wetting characteristics.

Base materials

For fabrication, repair and maintenance!

Dissimilar joints, tough buffer and intermediate layers prior to hardfacing, 14 % manganese steels, 13 – 17 % chromium and heat resistant steels up to +850 °C, armour plates, high carbon and quenched & tempered steels, surfacing of gears, valves, turbine blades etc.

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Ni
wt.-%	0.08	0.9	7.0	19.2	9.0

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	–110 °C
u	**430** ($\geq$ 350)	**640** ($\geq$ 500)	**36** ($\geq$ 25)	**110**	$\geq$ 32

u   untreated, as welded – shielding gas Argon + max. 2.5% CO_2

Operating data

	Polarity DC (+)	Shielding gases: Argon + max. 2.5% CO_2	ø (mm) 0.8 1.0 1.2 1.6

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (06632.), DB (43.014.13), DB (43.014.07), SEPROZ, VG 95132, CE, NAKS (ø 0.8; 1.0 mm), DNV (X), GL (4370S). A 7 CN-IG: TÜV-D (00024.)), DNV (X), GL (4370S)