BÖHLER CN 23/12-IG

TIG rod, high-alloyed, special applications

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9
W 23 12 L	SS309L	ER309L

Characteristics and typical fields of application

GTAW rod of type W 23 12 L / ER309L. This is a standard alloy for welding dissimilar joints with an average ferrite content 16 FN.

BÖHLER CN 23/12-IG is designed for very good welding and wetting characteristics as well as good safety after dilution when welding dissimilar joints. Suitable for service temperatures between -120 °C and +300 °C.

Base materials

Dissimilar joint welds: of and between high-strength, mild steels and low-alloyed QT-steels, stainless, ferritic Cr- and austenitic Cr-Ni- steels, manganese steels

Surfacing: for the first layer of corrosion resistant weld surfacing on ferritic-perlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N, as well as of high temperature steels like 22NiMoCr4-7 acc. SEW- Werkstoffblatt 365, 366, 20MnMoNi5-5 and G18NiMoCr3-7

Typical analysis of the TIG rods (wt.-%)

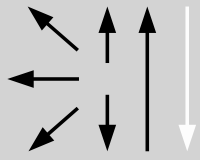
	C	Si	Mn	Cr	Ni
wt-%	≤ 0.02	0.5	1.7	23.5	13.2

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	–120 °C
u	**440** (≥ 320)	**580** (≥ 520)	**34** (≥ 25)	**150**	≥ 32

u untreated, as welded – shielding gas Argon

Operating data



Polarity:	Shielding gas:	Rod marking:	ø (mm)
DC (–)	100 % Argon	front: W 23 12 L back: ER 309 L	1.6 2.0 2.4 3.2

Preheat and interpass temperature as required by the base metal.

Approvals

TÜV (4699.), GL (4332), SEPROZ, CE, DB (43.014.29)