BÖHLER CN 22/9 N-IG

Solid wire, high-alloyed, highly corrosion resistant

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9
G 22 9 3 N L	SS2209	ER2209

Characteristics and typical fields of application

GMAW solid wire particularly suitable for welding of ferritic-austenitic duplex steels. By virtue of specific alloy composition which includes an extremely low oxygen content the deposit has, in addition to high tensile strength and toughness, also excellent resistance to stress corrosion cracking and pitting (PRE_N >35). In order to ensure good deposit properties, care must be taken to achieve controlled dilution and thorough back purging. Ferrite content 30 – 60 FN (WRC). Suited for temperatures down to -40°C, and up to +250°C. The wire exhibits good feeding, welding and wetting characteristics of the wire. The preferred gas for MIG welding is Argon + 20 % Helium + 2 % CO_2.

Base materials

Same-alloyed duplex steels, as well as similar-alloyed, ferritic-austenitic steels with higher tensile strength

1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4,
1.4462 X2CrNiMoN22-5-3 together with 1.4583 X10CrNiMoNb18-12,
1.4462 X2CrNiMoN22-5-3 together with P235GH/ P265GH, S255N, P295GH, S355N, 16Mo3
UNS S31803, S32205

Typical analysis of solid wire (wt.-%)

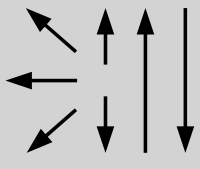
	C	Si	Mn	Cr	Ni	Mo	N		PRE_N
wt-%	≤ 0.015	0.4	1.7	22.5	8.8	3.2	0.15		≥ 35

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
u	**660** (≥ 450)	**830** (≥ 550)	**28** (≥ 20)	**85**	≥ 32

u untreated, as welded – shielding gas Ar + 20% He + 2% CO_2

Operating data



Polarity:	Shielding gases:	ø (mm)
DC (+)	Argon + 20 – 30 % He + max. 2 % CO_2	1.0
	Argon + 20 – 30 %He + max. 1 % O_2	1.2

Preheating and post weld heat treatment is not required by the deposit.
Interpass temperature should not exceed +150 °C.

Approvals

TÜV (04483.), DB (43.014.26), DNV (X), GL (4462S), Statoil, SEPROZ, CE