


Classifications										
AWS A5.9			EN ISO 14343-A			YB/T5092				
ER309L			W 23 12 L			H03Cr21Ni13Si				
Characteristics and typical fields of application										
<ul style="list-style-type: none">•GTAW rod of type W 23 12 L/ ER309L ,This is a standard alloy for welding dissimilar Joints with average ferrite content 16 FN.•BÖHLER TIG 309L 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										
<p>Dissimilar joint welds:</p> <p>Of and between high-strength, mild steels and low-alloyed QT-steels, stainless, Ferritic Cr- and austenitic Cr-Ni-Steels, manganese steels.</p> <p>Surfacing:</p> <p>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</p>										
Typical analysis of all-weld metal										
	C	Si	Mn	P	S	Cr	Ni			
wt-%	0.02	0.55	1.70	0.015	0.015	23.2	13.2			
Mechanical properties of all-weld metal – typical values (min. values)										
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	
AW	480(≥450)		610 (≥520)		36 (≥30)		150(≥47)		120 (≥32)	
AW as welded										
Operating data										
	Polarity:	Electrode identification:			Shielding gas:		ø mm		L mm	
	DC -	BÖHLER TIG 309L/ ER309L			(ISO14175) I1		2.0		1000	
							2.4		1000	
Approvals										
HAKC, CE										