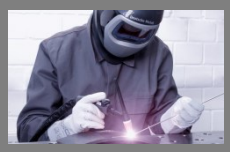
Technical Datasheet

IGS-Dilaton 36Nb

Wire Electrode / Welding Wire / GTAW Rod



Characteristics and scope of application

- Filler metal for FeNi36 and similar grades
- Joining of low thermal expansion alloys used for mouldsrequired in the production of high precision composite components
- Nb modification of standard FeNi36 filler metal assures crack free welding

Standard designations

DIN 17745	AWS	DIN Mat.-No.
-	-	-

Typical chemical composition of filler metal

	C	Si	Mn	Ti	Nb	Fe	Ni
Mass %	0.2	0.15	0.4	0.2	1.3	Bal.	36

All weld metal properties (min. values at rt)

Heat treatment	Yield strength	Tensile strength	Elongation	Impact toughness	
	Rp0.2	R_m	A_5	ISO-V	
as welded	51 ksi	71 ksi	20%	80 J	

Coefficient of thermal expansion (CTE)

Temperature T	°F	212	302	392	572	752	842	932	1022	1112
CTE 32°F - T	10^{-7}/°F	12.8	14.4	17.2	32.2	46.7	52.2	56.7	60.6	63.3

Welding instructions

Polarity	Shielding gas acc. to AWS A5.32
DC / +	SG-A, SG-AHe, SG-AH (max. 5% H_2)
DC / -	SG-A, SG-AHe, SG-AH (max. 5% H_2)
Low heat input and interpass temperature < 266°F. Stringer bead technique recommended.	
Base materials	
1.3912 – Alloy 36 – UNS K93600, 1.3981 – Alloy K – UNS K94610	

Packaging (tolerances acc. to AWS A5.02)

Diameter (in)		lbs/PU
1/16 - 1/8	X 36 in	11 / 22
0.035 – 0.045	BS 300 spool	33
0.06 – 1/8	K 415 / K 435 spool	55

Approvals on request

Deutsche Nickel