CEWELD®

Alloy 740H Tig

CATEGORY	GMAW-GTAW Solid wires
TYPE	Solid Nickel based welding wire for gas tungsten arc welding
APPLICATIONS	A Superalloy Specifically Designed For Advanced Ultra Supercritical Power Generation. Potential applications include advanced power production boiler tubes and diesel engine exhaust valves.
PROPERTIES	Alloy 740H is a nickel-base, precipitation hardenable superalloy that offers a unique combination of high strength and creep resistance at elevated temperatures along with resistance to coal ash corrosion. The alloy was originally targeted for use as A-USC boiler tubes in the superheater sections of these plants but was then adapted for application as a material for the steam headers to which the boiler tubes are connected.
CLASSIFICATION	AWS A 5.14: ER NiCrCo-1 (proposed) UNS: N07740 EN ISO 18274:
SUITABLE FOR	Inconel alloy 740H
APPROVALS	CE approved
WELDING POSITIONS:	

WELD METAL ANALYSIS ACC. AWS %

Ni	Cr	Co	Al	Ti	Nb	Fe	C	Mn	Mo	Si	Cu	B
Rem	23.5-25.5	15-22	0.2-2.0	0.5-2.5	0.5-2.5	<3.0	0.005-0.08	<1.0	<2.0	<1.0	<0.5	0.0006-0.006

MECHANICAL PROPERTIES

Heat Treatment	$R_{P0,2}$ (N/mm^2)	Rm (N/mm^2)	A5 (%)	Impact Energy (J) ISO-V -20°C	-40°C	-196°C	Hardness HRc / HV
PWHT	750	1050	20				

WELDING PARAMETERS / PACKING

Welding Parameters		Packing (kg)	
D (mm)	Current (A)	single	master
1.6 x 1000	90-130	5	25
2.4 x 1000	120-175	5	25
3.2 x 1000	150-220	5	25

REDRYING TEMPERATURE	not required
GAS ACC. EN ISO 14175:	I1, Ar/He (75-25)