

# 20.70.Nb

## SOLID WIRES FOR TIG, MIG AND SAW

### PRODUCT DESCRIPTION

Solid wires for TIG, MIG and sub-arc welding of nickel base alloys and dissimilar joints between nickel alloys, ferritic and austenitic stainless steels.

### SPECIFICATIONS

AWS A5.14M	ERNiCr-3
BS EN ISO 18274	S Ni 6082
UNS	N06082
APPROVALS	TÜV (TIG)

Also known generically as filler metal 82 [FM82]

### ASME IX QUALIFICATION

QW432 F-No 43

### CHEMICAL COMPOSITION (WIRE WT %)

	C	Mn	Si	S	P	Cr	Ni	Nb	Cu	Ti	Fe
min.	--	2.5	--	--	--	18.0	670	2.0	--	--	--
max.	0.05	3.5	0.50	0.015	0.020	22.0	bal	3.0	0.50	0.7	3.0
Typical	0.02	3	0.1	0.005	0.01	20	73	2.5	0.01	0.4	1

### ALL-WELD MECHANICAL PROPERTIES

Typical values as welded	Typical
Tensile strength [MPa]	640
0.2% proof strength [MPa]	360
Elongation [%] 4d	40
Impact ISO-V[U] -196°C	> 100

### TYPICAL OPERATING PARAMETERS

	Shielding	Current	Diameter [mm]	Parameters
TIG	Argon	DC-	2.4	100A, 12V
MIG	Argon	Pulsed	1.2	180A, 26V
SAW	NiCr flux	DC+	1.6	300A, 26V

### PACKAGING DATA

Diameter [mm]	0.8	0.9	1.0	1.2	1.6	2.0	2.4	3.2
TIG	--	--	--	--	2.5 kg tube	2.5 kg tube	2.5 kg tube	2.5 kg tube
MIG	15kg spool	15kg spool	15kg spool	15kg spool	--	--	--	--
SAW	--	--	--	--	--	--	25kg spool	--

### FUME DATA

MIG fume composition (wt %)(TIG fume negligible)

Fe	Mn	Cr3	Ni	Mo	Cu	OES [mg/m <sup>3</sup> ]
1	6	15	56	< 0.1	< 0.5	0.9