



DATA SHEET
DS 121
Rev. 02 dd 15/05/2015
INETIG 120

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CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER120S-G	EN ISO 16834-A: W Mn4Ni2CrMo
AWS A 5.28M: ER83S-G	
ASME SFA 5.28: ER120S-G	
ASME SFA 5.28M: ER83S-G	

APPROVALS

ALLOY TYPE

Copper-coated TIG rod for high strength steels.

APPLICATIONS

Copper-coated low alloy tig rod with Ni-Cr-Mo for welding high strength steels with minimum yield strength of 890 MPa and minimum tensile strength of 940 MPa. Excellent mechanical properties of weld metal and good toughness characteristics at low temperature. It could find application in earth moving equipment, cranes and industrial trucks fabrication.

MATERIALS TO BE WELDED

ASTM		EN		Others
API 5A L80		(BS 4360 Gr 55F)		RQT 701
HY80				Navy Q1
HY100				NAXTRA 70
				WELDOX 900
				QT 445
				HYSTAL 77

WELDING GUIDELINES

Preheat and interpass temperature up to 200°C. PWHT is not required. To obtain the best results in terms of the mechanical properties, the use with low heat input is advised (follow the instructions as indicated by steel producer).

TECHNICAL INFORMATION

Gas: Argon 100% (EN ISO 14175)
Welding positions: all positions

**WELDING PARAMETERS**

Current	DC - Straight polarity

PACKAGING DATA

Diameter (mm)	1.2	1.6	2.0	2.4	3.2	4.0
Length (mm)	1000	1000	1000	1000	1000	1000
Carton	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg

* tolerances according to EN ISO 544 specification.

All information in this data sheet is subject to change without notice.

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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	Ti %
0.08	1.90	0.80	0.007	0.007	0.40	2.15	0.50	0.15	0.10

TYPICAL MECHANICAL PROPERTIES

GAS		Yield strength	Tensile strength	Elongation on	Impact energy (Charpy V)				
		Rs	Rm	A 5d	+ 20°C	-30°C	-40°C	-50°C	-60°C
		(MPa)	(MPa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
I1	as welded	910	960	16	150	120	100	70	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL 120	AWS A 5.28: ER120S-G	EN 16834-A: G Mn4Ni2CrMo
	INEFIL 120 S1	AWS A 5.28: ER120S-1	EN 16834-A: G Mn4Ni2Mo
	INEFIL 110	AWS A 5.28: ER110S-1	(EN 16834-A: G Mn3Ni2,5CrMo)
TIG Rods	INETIG 120 S1	AWS A 5.28: ER120S-1	EN 16834-A: W Mn4Ni2Mo
	INETIG 110	AWS A 5.28: ER110S-1	(EN 16834-A: W Mn3Ni2,5CrMo)
SAW Submerged arc			
FCAW Cored wire	INETUB M121TGK4	AWS A 5.28: E120C-K4	EN 18276-A: T Mn2NiCrMo
	INETUB B121T5-K4	AWS A 5.29: E121T5-K4	EN 18276-A: T Mn2NiCrMo
SMAW Electrodes			