



a quality welding alloy

ARCtec® FCS 223 N

Conforms to: AWS A5.29-80 Class E-81T1-Ni1M-H4
 Certified by CWB to AWS A5.29:1998 Class E-81T1-Ni1M-H4

GENERAL CHARACTERISTICS:

ARCtec® FCS 223 N is a flux cored welding wire exhibiting a smooth easily controlled arc that transfers in a spray-type mode with sound porosity and crack free weld metal deposits. The slag firmly holds the molten puddle, thus enhancing out of position welding characteristics. The weld deposit has excellent low temperature impact values and stress relieved properties. Shielding gas is required.

APPLICATIONS:

ARCtec® FCS 223 N is excellent for applications where low temperature service in a low nickel analysis weld metal deposit is required. Also suitable for fabrication and repair in all positions on components of heavy machinery and petrochemical equipment.

MECHANICAL PROPERTIES:

Tensile Strength	Yield Strength	Elongation	ft/lb	Impact Strength	Test Temperature
89300psi (616Mpa)	79500psi (514Mpa)	27%-2"	104	joules 141	72°F / 22°C
			85	115	0° F / -18°C
			82	111	-20°F / -29°C
			64	87	-40°F / -40°C
			53	72	-60°F / -51°C

CHEMICAL COMPOSITION (UNDILUTED):

Mn	Ni	Si	C	P	S	Fe
1.46	.95	.40	.05	.02	.01	Bal.

OPERATING PARAMETERS:

WELDING PROCESS: FCAW

POLARITY: DC Reverse

SHIELDING GAS AND FLOW RATE

75% Argon/25% CO₂ at 30-40 CFH

Operating Range					
Diameter	Position	Stickout	Wire Feed Speed	Amps	Volts
.045"	Flat	1/2"(12mm)	230"/min (91mm/sec)	150-290	23-30
.045"	Horizontal	1/2"(12mm)	230"/min (91mm/sec)	150-290	23-30
.045"	Vertical up	1/2"(12mm)	230"/min (91mm/sec)	150-210	22-26
.045"	Overhead	1/2"(12mm)	230"/min (91mm/sec)	150-250	23-26
1/16"	Flat	3/4"(19mm)	119"/min (50mm/sec)	180-400	25-34
1/16"	Horizontal	3/4"(19mm)	119"/min (50mm/sec)	180-400	25-34
1/16"	Vertical up	3/4"(19mm)	119"/min (50mm/sec)	180-250	21-27
1/16"	Overhead	3/4"(19mm)	119"/min (50mm/sec)	180-310	22-27

STANDARD SIZE AND PACKAGING:

Size	12" spools	12" Coil
.045" 1.2mm	15.0 Kg	
1/16" 1.6mm	15.0 Kg	27.2 kg

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Subject to change without notice

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