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E2553T1-1/4 DATA SHEET

Pinnacle Alloys E2553T1-1/4

AWS CLASS E2553T1-4

CODE AND SPECIFICATION DATA:

AWS A5.22 ASME SFA 5.22

DESCRIPTION:

Pinnacle Alloys E2553T1-1/4 is a flux cored, all position electrode with a nominal composition of 25% chromium, 9.5% nickel, 3.5% molybdenum, 2% copper, and 0.2% nitrogen. Pinnacle Alloys E2553T1-1/4 is used to weld duplex stainless steels containing approximately 25% chromium. It offers greater resistance to intergranular corrosion, pitting, and stress corrosion cracking than 2209. Pinnacle Alloys E2553T1-1/4 exhibits high strength with excellent corrosion resistance, especially to pitting attack from chlorides in sea water. Pinnacle Alloys E2553T1-1/4 is well suited for welding similar materials in the chemical and fertilizer industries, offshore pipelines, sour gas lines, etc.

CHARACTERISTICS:

- Superb all position performance.
- Smooth, stable arc with very low spatter.
- Bead is shiny, smooth, and silvery in appearance.
- Slag removes easily.

SHIELDING GAS: 75-80% Ar/20-25% CO₂, 40-55 cfh

DIAMETERS: .045", 1/16"

WELDING POSITIONS: All positions

TYPICAL DEPOSIT COMPOSITION (Wt% 75 Ar/25 CO₂):

Carbon (C)	0.03
Chromium (Cr)	25.40
Copper (Cu)	2.20
Manganese (Mn)	1.10
Molybdenum (Mo)	3.80
Nickel (Ni)	9.50
Nitrogen (N)	0.20
Silicon (Si)	0.70

Ferrite Number (WRC, 1992) – 42

TYPICAL MECHANICAL PROPERTIES (75% Ar/ 25% CO₂):

Ultimate Tensile Strength (psi)	124,000 psi
Yield Strength (psi)	97,000 psi
Percent Elongation	24%



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TYPICAL WELDING PARAMETERS (75% Ar/25% CO₂):

Diameter	WFS (ipm)	Amperage	Volts	ESO (in.)	Deposition Rate (lbs/hr)
.045"	250	130	24	5/8-3/4"	5.4
	300	160	26	5/8-3/4"	6.3
	425	200	28	5/8-3/4"	9.2
	780	270	34	5/8-3/4"	16.2
1/16"	150	170	25	3/4-1"	5.4
	195	215	27	3/4-1"	7.0
	240	250	28	3/4-1"	8.6
	320	305	29	3/4-1"	11.5

NOTE: Optimum conditions are in boldface type.

NOTICE: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

CAUTION: Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys MSDS sheet may be obtained at www.pinnaclealloys.com.