

ARCTEC® 277 ALLOY STEEL



GENERAL CHARACTERISTICS:

ARCTEC® 277 produces weld deposits with excellent metal to metal wear and strain hardening properties. The weld deposit is also highly ductile and has good crack resistance when used for joining metals that vary in analysis.

APPLICATIONS:

ARCTEC® 277 is suitable for joining and build up of manganese railroad frogs and rails, manganese to itself or carbon steel, bearing surfaces, machinery parts subjected to sliding wear and high impact loads, and as a tough buffer layer for hard overlays.

WELDING PROCEDURE:

Clean weld area free from oil, grease, rust and other surface contaminants. Bevel heavy section before welding. Maintain a short arc and use stringer beads to prevent overheating. Allow deposit to cool before removing slag. Preheating and postweld heat treatment is generally not required, but may be specified or recommended for the base material.

MECHANICAL PROPERTIES:

Tensile Strength	Yield Strength	Elongation	Impact Strength		
			ft/lbs	Joules	Temperature
85,000 psi 585 Mpa	51,000 psi 350 Mpa	35 to 40% - 2"	37-49	50-66	20°C 68°F

OPERATING PARAMETERS:

WELDING PROCESS: SMAW

POLARITY: DC Reverse or AC

Recommended Amperage:

Diameter	2.50 mm 3/32"	3.25 mm 1/8"	4.0 mm 5/32"	5.0 mm 3/16"
Amperage	60-80	80-100	110-130	150-170

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