

RANITE[®] F

General Description

- Ranite F is a 21st century redesign of an older version Rankin product for two-layer application on parts subject to severe abrasion and moderate to heavy impact. This evolutionary material provides powerhouse protection and operates at very low amperages necessary for delicate jobs, making it a popular choice of owners of small AC welding machines.
- Ranite F is a solid alloy steel core with power ingredients added in the extruded coating. A proprietary combination of chromium, carbon, manganese and silicon gives all-weld metal deposits Rockwell C hardness ranging from 54 to 58.
- Weldability is excellent with a soft arc and slag is self-peeling.
- Ranite F can be applied to mild steel, carbon steel and manganese steel components.
- Ranite F can be applied AC or DC, straight or reverse polarity; straight polarity produces maximum density. It can be welded vertically or out-of-position. Limit weave beads to 3/4" or use stringer beads. Drag, normal or long arc can be easily manipulated with this electrode.

Typical Applications

Agriculture – Sub soiler shanks and teeth, root cutters, chisel points, cultivator points, ammonia injector knives.

Brick and Clay – Augers, plows, feeder shoes, conveyors, mixer paddles.

Construction – Buckets and teeth, augers, screws, grizzlies, draglines, scrapper sides, mixer paddles.

Crushing, Screening, Grinding – Roll crushers, rotors, stripper bars, pulverizers, hammers, augers, grates.

Dredging – Impellers, cutter heads and teeth, swivels and elbows, buckets, side plates.

Logging and Lumber – Chipper chutes and discs, bed plates, clutch jaws, chain drive tumblers, debarking hammers (with Rantung on lead edge), hogs, rotors.

Mining – Drill collars, stems, augers, draglines, screws, teeth, coal augers, slushers.

Railroads – Tamping tools, tie saw blades, digging lugs on cribcleaners, brake shoe hangers, retarder beams.

Cement – Bolt heads on liner plates, chutes, forming shoes, chain idlers, feeder screws, feed spouts.

Welding Parameters

Size	Amperage
1/8" x 14" 3.2mm	125-140
5/32" x 14" 4.0mm	140-160
3/16" x 14" 4.8mm	175-200
Melting Point	2550°F

Typical Hardness – Rockwell C

All-Weld Metal	54-58
Two Layers on Mild Steel	52-56
Water-quenched from 1800°F	57-60
Two layer on 1045 Steel	53-57
Water-quenched from 1800°F	57-60

Deposit Characteristics

Abrasion Resistance	Excellent	Surface Checks	Yes
Impact Resistance	Moderate	Machinable	No
Compressive Strength	Moderate	Forgeable (at red heat)	Yes
Maximum Number Layers	Two (2)	Magnetic: On Carbon Steel	Yes
		Magnetic: On Manganese	No

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