

Royal 235

Shielded Metal Arc Welding
(SMAW) Stick Electrode

AC/DCEP
All Position

Hard-Facing, Build-Up and Joining Alloy



"The Royal Line"

CROWN ALLOYS COMPANY

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Nickel Manganese Build-up and Joining Electrode

Typical Applications

Royal 235 is an excellent electrode for limitless build-up of parts subject to extreme shock, impact and abrasion. The build-up can be applied to manganese, low-alloy, mild and stainless steels. The **Royal 235** will also produce high strength welds on manganese steels as well as manganese steels to other steel combinations. Used to repair and build-up railroad tracks, frogs and switch points. It is also used on roller crushers, crusher jaws, hammer mill hammers, mantles, shovel tracks, bucket teeth and other mining and construction applications. **Royal 235** is the perfect choice as a base for harder overlays such as the **Royal 240**. Deposits are heat and corrosion resistant, nonmagnetic, do not cross-check and work-harden in service. The **Royal 235** can be cut with a torch. It has excellent weldability and very low spatter.

Specifications

- Hardness 19-25 (Rockwell C) as deposited
Up to 45 (Rockwell C) after work hardening
- Tensile Strength up to 126,000 psi

Procedure

Clean joint area. Warm the base metal to 70°F before welding or gouging. Heavy sections should be vee'd out. Use **Chamfer 204** to form a groove to provide best penetration. Before repairing any manganese steel, be sure to remove the work-hardened surface of the part first especially when repairing rail components. Set welder to AC or DC reverse polarity (DCEP). Apply with short to medium arc using stringer or weave beads (2-3 times the electrode diameter) and avoid lingering in one spot. To prevent embrittlement of manganese steels, the interpass temperatures should NOT exceed 500°F at any point that is one inch from the area being welded. Peening while still hot helps to shape the part, reduce stresses and increase surface hardness.

Sizes, Amps and Part Numbers

Diameter	Amps	Part Numbers	
		1# Package	5# Package
1/8	80 - 135	RE235/EO-BP	RE235/EO
5/32	120 - 190	RE235/EP-BP	RE235/EP
3/16	150 - 250	RE235/EQ-BP	RE235/EQ

The MIG equivalent of Royal 235 is Royal 13-25 FC.



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).

THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.

SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.

