

Royal 290

Shielded Metal Arc Welding
(SMAW) Stick Electrode

Alloy for Cast Iron

AC/DCEN
All Position



"The Royal Line"

CROWN ALLOYS COMPANY

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Premium High Nickel Alloy for Cast Iron

Typical Applications

Royal 290 is a premium high nickel electrode which features extra arc stabilizers and cleaning agents enabling dense, strong, crack-resistant welds even on dirty, contaminated, scaly and oil-soaked base metal. This special flux coating displaces the impurities of the base metal into the slag instead of being trapped in the weld deposit. The **Royal 290** flux coating is specially formulated to generate a pulsed arc for low temperature welding of cast irons. All of the above flux properties ensure porosity free welds. Use on engine blocks, machine bases, gear housings, manifolds and other thin sections of cast iron. **Royal 290** is ideal for filling holes and building up worn or missing sections which must be machined to final dimension after welding. Deposits can be filed, drilled and tapped.

Royal 290 is the best alloy to use when welding cast iron to stainless steel.

Specifications

- Tensile Strength up to 50,000 psi
- Color Match similar to cast iron
- Elongation in 2" 3.5%
- Hardness approx. 160 - 190 Brinell

Procedure

Clean weld area if possible. Use AC or DC straight polarity (DCEN). Bevel or use **Chamfer 204** to form a "U" groove. Prepare the groove by grinding or filing it clean. Preheating is not necessary, although warming to 400°F to 500°F will produce a softer weld and minimize stresses on heavier sections. Locate the ends of all cracks. Use the **Royal 290** to weld 1-1½" long beads perpendicular to the ends of the crack. Begin welding from the center of the crack and weld alternately to the right and left. Select lowest possible amperage. Maintain a medium long arc with electrode tilted slightly in the direction of travel. Short stringer beads or narrow weave beads should be used to prevent excessive heat build-up. When breaking the arc, always fill the crater and drag rod back over the weld deposit. Stopping to peen often will help relieve stresses. When re-striking the arc, start on previously deposited weld metal, not on the base material. Allow part to cool slowly.

Sizes, Amps and Part Numbers

Diameter	Amps	Part Numbers	
		1# Package	5# Package
3/32	30 – 80	RE290/EN-BP	RE290/EN
1/8	55 – 110	RE290/EO-BP	RE290/EO
5/32	75 – 140	RE290/EP-BP	RE290/EP
3/16	100 – 180	RE290/EQ-BP	RE290/EQ



!!!! 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.

