Medium Nickel Alloy for Cast Iron

Typical Applications

Crown 255 is an economical nickel-iron electrode for general repair on all clean cast, ductile, nodular and meehanite iron. This electrode produces welds with higher strength and ductility than straight nickel electrodes. Deposits are machinable, but harder and more resistant to abrasion. Crown 255 is used for heavy sections of high-strength and engineering-grade cast iron. Castings containing phosphorus levels higher than normal (approximately 0.20% phosphorus) are more readily welded using the Crown 255 than with the Crown 295 or even the Royal 290. The Crown 255 is also used to weld clean sections of cast iron to steel. Please see the Royal 260 technical sheet if welding on dirty, scaly or oil soaked castings.

Specifications

AWS A5.15
E NiFe-CI

- Tensile Strength: Up to 70,000 psi
- Yield Strength: Up to 55,000 psi
- Color Match: Good
- Elongation in 2": 4 – 12%
- Hardness: 200 to 400 Brinell
- Deposit: Magnetic

Procedure

Clean weld area thoroughly. 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 Crown 255 to weld 1-1½” long beads perpendicular to 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. Allow part to cool slowly.

Sizes, Amps and Part Numbers

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Amps</th>
<th>Part Numbers</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1# Package</td>
</tr>
<tr>
<td>3/32</td>
<td>40 – 80</td>
<td>NE255/EN-BP 5 lb pkg</td>
</tr>
<tr>
<td>1/8</td>
<td>60 – 110</td>
<td>NE255/EO-BP 10 lb pkg</td>
</tr>
<tr>
<td>3/16</td>
<td>130 – 180</td>
<td>NE255/EQ-BP 10 lb pkg</td>
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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.