



40 YEARS OF PERFORMANCE DESIGNED SOLUTIONS

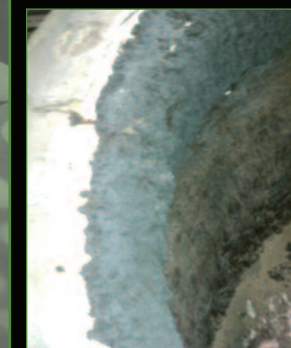
APPLICATION: IRON CHANNEL FURNACES

LOCATION: NORTHEAST USA

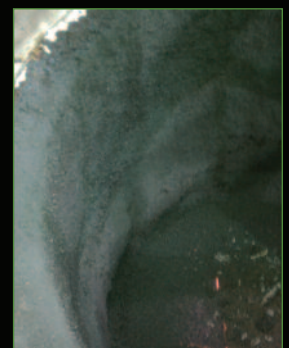
CUSTOMER A	CUSTOMER B
<b>EQUIPMENT ❖</b>	
<ul style="list-style-type: none"> <li>40-ton holder</li> <li>Grey iron</li> <li>Cupola melting</li> </ul>	<ul style="list-style-type: none"> <li>60-ton holder</li> <li>Ductile iron</li> <li>Coreless melting</li> </ul>
<b>HISTORY ❖</b>	
<p>Due to brick wear in the upper case, past practice required a \$40,000 annual brick reline along with a floor and inductor reline.</p>	<p>After 12 months of operation, the holder required an upper case dry vibe reline costing \$166,000, but the floor and inductor still had life.</p>
<b>URC APPROACH ❖</b>	
<b>UPPER CASE</b>	
<ul style="list-style-type: none"> <li>Reline upper case brick <u>every other year.</u></li> <li>In between years, shotcrete upper case with <b>UNI-SHOT 400.</b></li> <li>Reline floor and inductor every year.</li> </ul>	<ul style="list-style-type: none"> <li>Extend standard 12 month life to <u>approximately 16-18 months.</u></li> <li>Once or twice during the campaign, shotcrete upper case with <b>UNI-SHOT 400.</b></li> <li>Reline floor and inductor every 16-18 months.</li> </ul>
<b>URC APPROACH ❖</b>	
<b>FLOOR, THROAT AND INDUCTOR</b>	
<p><b>Floor:</b></p> <ul style="list-style-type: none"> <li><b>UNI-RAM VR-556A</b> Fused Al<sub>2</sub>O<sub>3</sub>, SiC containing, dry vibratable designed specifically for floors of induction furnaces that melt or hold iron.</li> </ul>	
<p><b>Throat:</b></p> <ul style="list-style-type: none"> <li><b>UNI-RAM VR-570A</b> Fused Al<sub>2</sub>O<sub>3</sub>, mullite bonded dry vibratable throat lining designed to resist slag attack in iron induction furnaces.</li> </ul>	
<p><b>Inductor:</b></p> <ul style="list-style-type: none"> <li><b>UNI-RAM VR-300A</b> High Al<sub>2</sub>O<sub>3</sub> inductor composition that forms a magnesia alumina spinel bond to maximize wear against iron alloys.</li> </ul>	



To extend the furnace campaign and eliminate an annual brick reline, **UNI-SHOT 400** is shotcreted into a vertical channel iron holder in the Northeast.



BEFORE



AFTER

**UNI-SHOT 400** is a high alumina, low cement shotcrete/pumpable composition with the following features:

- Proprietary combination of SiC, graphite and antioxidants.
- Excellent resistance to abuse, slag and oxidation in furnaces and ladles.
- Long list of successful foundry applications across the US.

**DELIVERED VALUE TO CUSTOMER ❖ OVER TWO-YEAR PERIOD...**

SAVE **\$40,000** (brick job)  
 - **16,000** (2 repairs)  
 = **\$24,000 IMPACT**  
 + 5 to 7 days extra capacity

SAVE **\$83,000** (half brick job)  
 - **18,000** (2 repairs)  
 = **\$65,000 IMPACT**  
 + 5 to 7 days extra capacity

