

RENO REFRACTORY TECHNOLOGY LADLES

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Reno Refractory Technology Porous Plug, De-Sulphurization Ladles

Reno Refractories, Inc. is proud of our world-leading no-cement nano-bonded colloidal silica products. De-Sulphurization Ladles will perform longer and provide a lower turnaround maintenance costs for our valued customers when utilizing this proven technology.

RENO NC NANO-TECH TECHNOLOGY

All of our NC products provide properties that are unmatched, by any other refractory supplier. These are:

 Low Permeability Super High Hot Strengths Pore Sizes are 2-3 Microns Abrasion Values below 6 CC Loss 	 Resists Penetrations Impact Resistance Molten Slags do not Wet the Structure Lasts Longer with High Turbulence
<u>Refractory Surfaces</u> Hot Face / Surface Treatment	Reno ElectroCoat [™] 75 SiC Reno has taken the new Electro technology and produced a near zero permeable structure surface treatment that contains high levels of Silicon Carbide. Reno ElectroCoat [™] SP is robust and strong to resist the violent reactions during inoculation treatments.
Castable Lining	Reno NC 6059 CA Reno uses the strength of an all bauxite product and added some silicon carbide to further increase thermal shock resistance and reduce surface corrosions from the high levels of lime and spar fluxes.
Floor	Reno NC 60 Castable The no cement castable will last longer and is easier to remove than the coarse grained wall lining when replacing the plugs.
Benefits	Reduced Cleaning Labor, increases Safety and decreases Workers' Compensation Claims, increased Production.
Insulation and Safety Liner Safety Surface Treatment	Reno Coat It AL To prevent Carbon Transfer
Insulation	2800 °F IFB Brick Split / Reno MO Super 3 Mortar
Тор Сар	6-Inches of Reno Cast 70 KH / Hi Wire 3/8" # 304 V-Anchors x 60% of ladle thickness, welded every 8-inches apart always produces a cracked lining. This economical solution can be cast along with castable but the high volume of steel fibers adds a robust in the field thrust plate barrier to keep the ladle in compression which eliminates cracks and increase life.
Coat IT AL (Steel Shell) Prevents Carbon Transfer	Reno ElectroCoat TM 75 SiC Hot Face / Surface Treatment Reno NC 6059 CA (Sidewall) Reno NC 60 (Floor)

RENO REFRACTORIES, INC.

New Reno Refractory Technology Ductile Iron Ladles

Reno Refractories, Inc. is proud to introduce our new Refractory Technology, "**Reno ElectroCast™**." When mixed with our already world-leading no-cement nano-bonded colloidal silica products, Ductile Iron Ladles will perform longer and provide labor and alloy savings as well as lower turnaround maintenance costs for our valued customers.

NEW RENO ELECTROCAST™ TECHNOLOGY

All of these new products provide properties that are unmatched, by any other refractory supplier. These are:

 No Alkali or Iron Oxide Penetrations Impact Resistance Molten Slags do not Wet the Structure Lasts Longer with High Volume Charging 	
Reno ElectroCoat [™] SP Magnesia Fade is a common problem throughout the ductile iron making industry. If one examines the slag adherences, the compositions are mainly magnesia + calcium + silica; the alloys used for nucleating the carbon flakes into spheres for ductile. The magnesia is attracted to silica which is inherent in most refractory. Reno has taken the new Electro technology and produced a near zero permeable structure surface treatment that contains zero silica and thus inhibits the magnesia transfer. Rather than the sometimes used magnesia lightweight air-setting products, that have little strength, our Reno ElectroCoat™ SP is robust and strong to resist the violent reactions during inoculation treatments.	
Reno ElectroCast™ FST Another major technology first is Reno's Synthesized Mineral Forsterite in combination with our Electro Technology. This product also is silica free and it will behave similar to pure mullite in its ability to tolerate thermal cycling. Combining the working surface and the castable back up will provide much longer campaigns before removing for cleaning and reduce the very expensive amounts of alloys to provide carbon nucleation.	
Reduced Alloy Costs, Reduced Cleaning Labor, increases Safety and decreases Workers' Compensation Claims, increased Production, and Higher Quality as the interior remains a stable size for Accurate Additions Insulation and Safety Liner.	
Reno Coat It AL To prevent Carbon Transfer	
2800° F, IFB Brick Split / Reno MO Super 3 Mortar	
6-Inches of Reno Cast 70 KH / Hi Wire 3/8" # 304 V-Anchors x 60% of ladle thickness, welded every 8-inches apart always produces a cracked lining. This economical solution can be cast along with castable but the high volume of steel fibers adds a robust in the field thrust plate barrier to keep the ladle in compression which eliminates cracks and increase life.	
Reno ElectroCoat [™] SP Coat It AL (Steel Shell) Hot Face / Surface Treatment Reno ElectroCast [™] FST Insulation Lining	

New Refractory Technology Grey Iron Transfer Ladles

Reno Refractories, Inc. is proud to introduce our new Refractory Technology, "**Reno ElectroCast™**." When mixed with our already world-leading no-cement nano-bonded colloidal silica products, Grey Iron Transfer Ladles will perform longer and provide labor and alloy savings as well as lower turnaround maintenance costs for our valued customers.

NEW RENO ELECTROCAST™ TECHNOLOGY

Reno ElectroCoat™ 75 SiC Hot Face / Surface Treatment

 Almost Zero Permeability Super High Hot Strengths Pore Sizes as low as 0.01 micron Abrasion Values below 3 CC Loss 	 No Alkali or Iron Oxide Penetrations Impact Resistance Molten Slags do not Wet the Structure Lasts Longer with High Volume Charging
<u>Refractory Surfaces</u> Hot Face / Surface Treatment	Reno ElectroCoat [™] 75 SiC Reno has taken the new Electro technology and produced a near zero permeable structure surface treatment that contains high levels of Silicon Carbide. Reno ElectroCoat [™] 75 SP is robust and strong to resist the violent reactions during inoculation treatments.
Castable Lining	Reno ElectroCast™ 70 This super refractory is engineered to tolerate thermal cycling and has all the advantages listed for our Electro Castables.
Benefits	Reduced Cleaning Labor, increases Safety and decreases Workers' Compensation Claims, Lower Overall costs with increased Lining Performance.
Insulation and Safety Liner Safety Surface Treatment	Reno Coat It AL To prevent Carbon Transfer
Insulation	2800° F, IFB Brick Split / Reno MO Super 3 Mortar
<u>Top Cap</u>	6-Inches of Reno Cast 70 KH / Hi Wire 3/8" # 304 V-Anchors x 60% of ladle thickness, welded every 8-inches apart always produces a cracked lining. This economical solution can be cast along with castable but the high volume of steel fibers adds a robust in the field thrust plate barrier to keep the ladle in compression which eliminates cracks and increase life.

It is the mission of Reno Refractories to investigate, develop, communicate and deliver valuable refractory products and services to our customers in North America. We have a responsibility to supply the best value in refractory technology by optimizing the profits and safety of our customers. We take pride in our reputation as a leader in these endeavors.

Reno ElectroCast[™] 70