



Unconventional Solutions, Inc.
Partnering with Your Industry to Repair - Protect - Upgrade

February 2023

Leading Edge

Improve Pump and Energy Efficiency as much as 20%

The USI team has a ceramic enhance hydrophobic coating solution for you!


The images below are of a horizontal split case (HSC) pump in need of refurbishment to improve its pump and energy efficiency. After disassembly, it was aggressively sandblasted to SSPC-SP-5 NACE 1 White Metal Blast Cleaning. USI ResiMetal Repair/Rebuild was then used to fill in any holes or pitting, followed by two top coats of USI ResiMetal Ceramic Enhance Hydrophobic Coating. After full chemical cure (according to the Top Coats Technical Data Sheet), the HSC pump was reassembled and put into use.

The final result:

(according to a Rochester MCWA study):

- Monthly savings of \$1,851
- Annual savings of \$22,207
- 5 year savings of \$111,036

WHY is it important to ceramic coat new or existing pumps/casings?

According to the US Dept of Energy Office of Industrial Technology (Pump Life Cycle Costs: A Guide to LCC Analysis for Pumping Systems, Dec. 2000) pumping systems account for nearly 20% of the world's electrical energy demand. Any technology which produces even moderate gains in pump performance and pumping efficiency can lead to substantial savings in terms of worldwide energy use, costs and the associated greenhouse gas emissions. 



Before: cavitation, erosion/corrosion



Close up: cavitation, erosion/corrosion



After: blasting, metal filler, 2 top coats

USI ResiMetal 101 or 201

for Metal Repair/ Rebuilding without hazardous "Hot Work":

- Solvent Free Epoxy Technology
- Enhanced Wear/Abrasion Resistance
- Simple Mixing Ratio 3:1 by Volume
- Excellent Chemical/Thermal Resistance
- High Build Capability 1" without slump
- No Shrinkage
- Superior Adhesion to Metallic Surfaces

Ideal for: Pump Housings, Worn Impellers, Internal Pipe Surfaces, Separator Housings, Bow Thruster Tunnels, Rudders, A-Frames & P-Brackets, Tube Sheets, End Plates, Water Boxes, Cyclones, Centrifuges, Process Vessels.

resimac Ltd.

USI ResiMetal 203 or 202 Ceramic

Enhance Hydrophobic Coating:

- Solvent Free Epoxy Technology
- Enhanced Wear/Abrasion Resistance
- Excellent Chemical/Thermal Resistance
- Apply by Brush up to 60 mils per coat
- High Gloss Finish = Improved Flow Rates
- No Shrinkage
- Superior Adhesion to Metallic Surfaces
- Excellent Resistance to Cavitation

Ideal for: Pump Housings, Worn Impellers, Internal Pipe Surfaces, A-Frames & P-Brackets, Tube Sheets, End Plates, Water Boxes, Rudders, Tanks, Centrifuges, Heat Exchangers, Chillers.

Keeping You in the Know Since 2002



USI Dates to Remember

February 5-10

AMPP/NACE CIP 1 or Basic Corrosion Inspector classes

USI Group Headquarters (Wixom, MI)

Course Number: 47423197 - Course Name:

CIP Level 1 - Wixom, MI - February 5-10, 2023

February 13-17

AMPP/NACE CIP 2 or Corrosion Inspector classes

USI Group Headquarters (Wixom, MI)

Course Number: 42623165 - Course Name:

CIP Level 2 - Wixom, MI - February 13-17, 2023

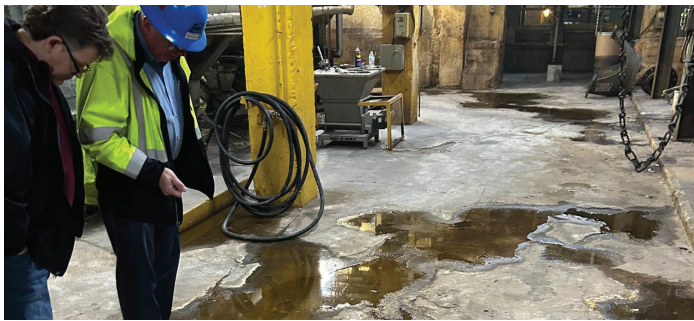
Register at <https://bit.ly/3HIAzDE>

February 16

SEMPPEs in at Whiskey on the Water (Wyandotte, MI)

March 16

SEMPPEs at Bakers of Milford (Milford, MI)



Doug Klingensmith looking at rough floor and chemical containment areas is an ongoing priority at Unconventional Solutions, Inc. **Prevent EPA fines with our Repair-Protect-Upgrade solutions.**

PRODUCT HIGHLIGHT

VpCI®-126 Blue Series

iCortec® VpCI®-126

Blue is heat-sealable and can be used with all types of manual or automated heat-seal packaging equipment. The material protects small or large parts, and is available in a variety of standard and customized forms including bags, sheeting-reinforced film, Zip-Lock and Autobags, gusseted liners, bags-on-a-roll, perforated sheeting, coil covers, shrink film, and tubing. This state-of-the-art film construction provides multi-metal protection for parts, equipment, and vehicles for up to three years, even in aggressive outdoor conditions.



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Metal parts packaged in VpCI-126 EM UV Film receive continuous protection against salt air and humid environments, moisture, aggressive industrial atmospheres, and dissimilar metal corrosion.

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Call us @ 248.735.7000 for a FREE demonstration.

<https://www.usigroups.com/product/vpci-126-blue-series/>



PURCHASE ORDER (PO) ORDERING CAPABILITIES COMING SOON

Call us at 248.735.7000 or email Customer Service at cs@usigroups.com to set up an online account.

Contact the USI team today! We have an Unconventional Solution for YOU!

The USI Team offers:

Technical Support • Training • Troubleshooting
HOTSHOT & Same Day Local Deliveries available for orders placed by 12 p.m. EASTER TIME

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Fast, Friendly Service & Shipping

