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CHALLENGING THE STATUS QUO OF FLASH RUST PREVENTION

PRESENTER

WORLD LEADER IN SURFACE PREPARATION

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OUR MISSION

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Prepare a surface substrate that allows coatings to perform as desired – over time.

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WHAT MAKES A Good Myth?

- It must have some element of truth to it.
- It must be told over and over as if it were fact.
- It must have a “correlation to a result” as if to prove it.

What is “Flash Rust”?

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“Rusting that occurs on metal within minutes to a few hours after cleaning is complete. The speed with which flash rusting occurs may be indicative of salt [or other] contamination on the surface, high humidity, or both.”

- SSPC Protective Coatings Glossary (PCG)

THE IMPORTANCE OF **FLASH RUST PREVENTION**

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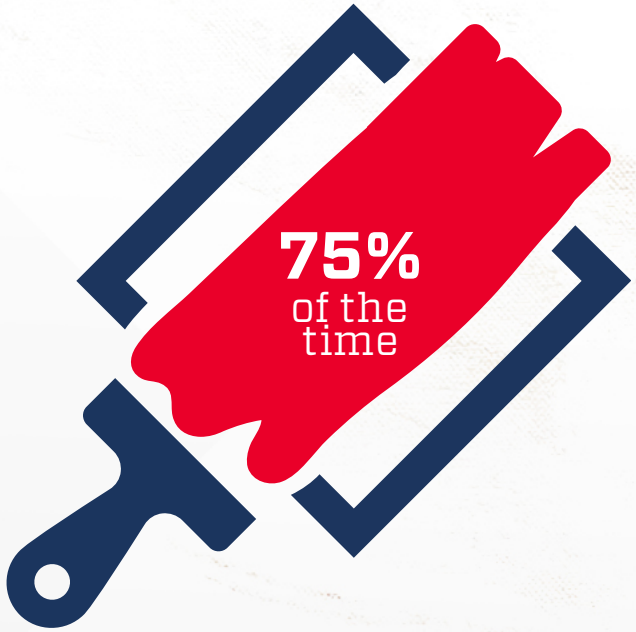
According to Forensic Failure Inspections:

Salts are attributed as a major cause of premature Coating Failure

According to SSPC and NACE:



Coating failure can be attributed to poor surface preparation

MYTH #1

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Acid-based solutions are the ONLY way to prevent flash rust. Basic or alkaline cleaners do not work.

MYTH #1

Acid-based solutions are the only way to prevent flash rust.

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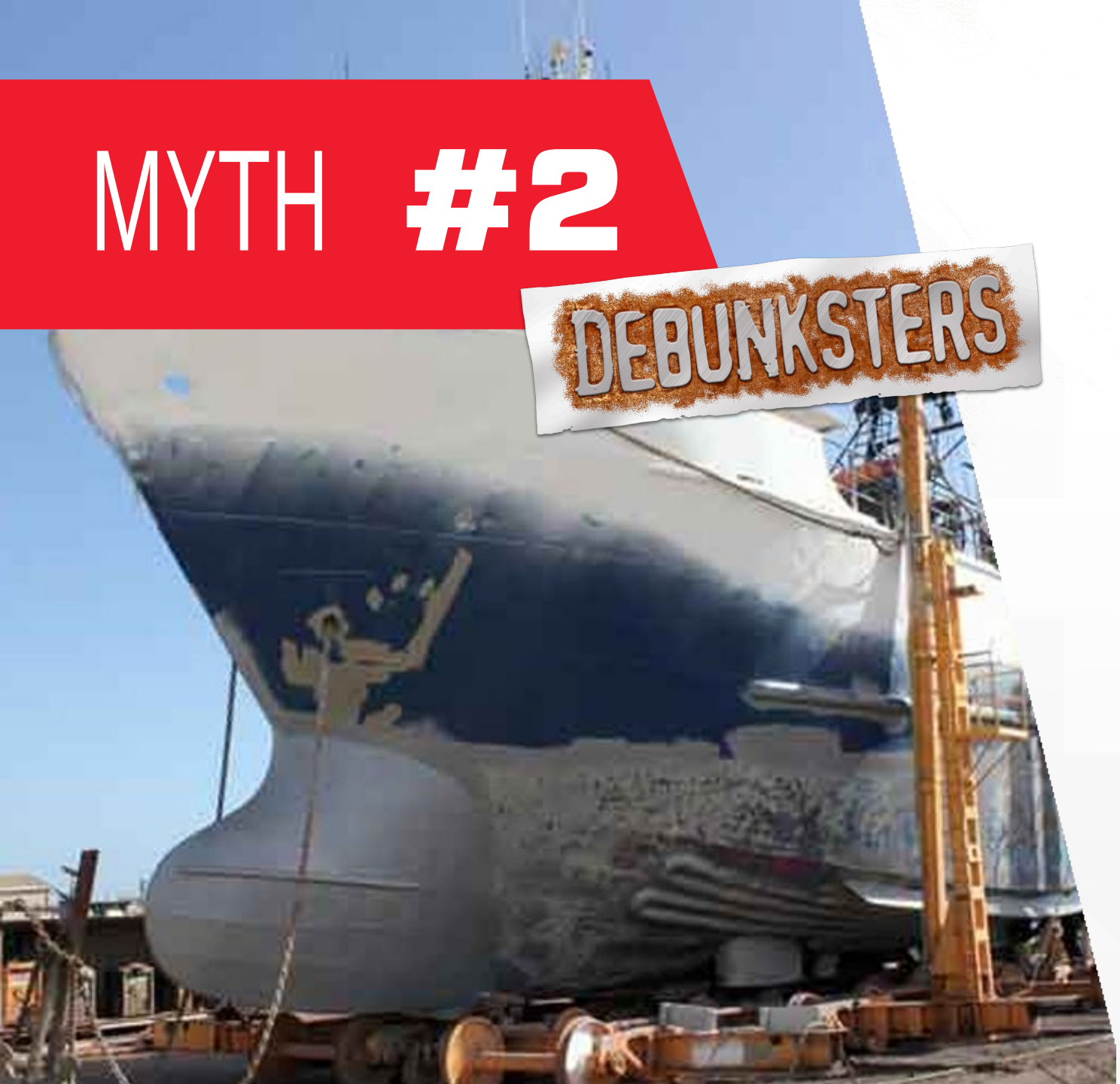
fact

When trying to remove soluble salts, what counts is getting the water to the salts. The solubility of the salt does the rest. Acids do remove some salts but also contaminate the substrate with acid salts and anionic surfactants. Since non-ionic cleaners like HoldTight® 102 do not contribute ions to the cleaning solution, they will dissolve ALL soluble salts better than acid-based cleaners.

Get deeper

The only way to be certain the surface is salt free, even after cleaning, is to run a conductivity test.

Competitors claim that only low pH (i.e., acidic) cleaners will remove salts from steel. This would be like saying since orange juice is acidic it could be used to remove chloride from steel.



MYTH #2

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Soluble salts are bonded to steel and require acids to break that bond.

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fact

Often, salts are referred to as molecules. The fact is, salts are not molecules but should be more properly referred to as “formula units.”

Soluble salts are described in the Society for Protective Coatings (SSPC) Protective Coatings Glossary as — “An ionic chemical compound that dissolves in water to form a solution of positive and negative ions.”

Get deeper

HoldTight® 102 is a proprietary amine-based surfactant. While one end of the amine molecule is attracted to water, its long hydrocarbon tail is repelled by water and floats on the surface, while the other end sinks below the surface, disrupting the tension.

Like a detergent, HoldTight®102 makes water wetter, so it removes ionic contamination more efficiently.

MYTH #3

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Water quality does not have an impact on flash rust.

MYTH #3

Water quality does not have an impact on flash rust.

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fact

One of the big contributors to flash rust is POOR water quality. There is no chemical reaction occurring with the removal of soluble salts. It is a solubility issue.

The higher purity water will dissolve more salts. If the surface is corroded or pitted, surface cleaners can help remove salts. Hard water also leaves calcium carbonates on surface after water evaporates and the carbonates cause flash rusting.

Get deeper

The energy imparted to pressurized water helps break the surface tension of the water to make it more effectively wet the surface.

Always ensure that you use clean potable water in the blasting process. If you are using river, well, or bore water, you may need to filter or treat the water before use.

MYTH #4

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There is no "magic bullet" solution that will not leave salts or other ionic particulates behind on the surface.

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fact

To remove the salts, the solvent (water) needs to reach the solute (salts). It is necessary for the cleaner to reduce the surface tension of the water to better access the salt. The surfactant in the cleaners, along with the high pressure of the water, pull the salts into solution, which helps to remove insoluble particles and dissolve any soluble salts.

Get deeper

HoldTight® 102 is a water-soluble salt remover that prevents flash rusting. It leaves no residue on the surface.

The acid left by other products, if left on the surface, will react with the steel to form acidic salts and corrosion cells that will cause the steel to flash rust.

Typically acid based systems need to be followed by amine-based additive (102) to clean off acid salts left behind.

MYTH #5

HOLDTIGHT

Chlorides pull water through membranes.

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fact

Chloride salts don't pull water through the coating. The air or solution on one side of the coating cannot directly detect what is on the other side unless there is a breach/holiday in the coating.

When used properly, HoldTight®102 will leave no residue that would interfere with any coating or lining.

Get deeper

The hygroscopic nature of a salt has nothing to do with water penetrating the coating. Many coating manufacturers have tested 102 used before applying their products. Most have approved 102 for use with all of their coatings on the basis of tests and/or field experience with 102 over many years.

But if the salt is present under the coating it provides the beginning of a corrosion cell when it interacts with the water that does travel through permeable coating films.

THE TRUTH ABOUT **FLASH RUST PREVENTION**

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It's all about time management. HoldTight slows down the clock!

- HoldTight® 102 is not a "coating" – and it is not "applied" to the surface.
- Simply stated, HoldTight® 102 is a washing agent, a surfactant - This forces the water with the 102 into the profile or pits of the surface resulting in more thorough cleaning.
- Leaves no residue if allowed to evaporate; when the surface is dry, the 102 is gone. There is nothing to remove.
- Surface is IMMEDIATELY ready to apply your primer or coating up to 24-72 hours after cleaning without flash rust.

MIX RATIO **24-72 HOUR FLASH-RUST-FREE WINDOW**

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BLAST CYCLE

Effective dilution ratios range from as little as one-part HoldTight®102 to 250 parts water, to one-part HoldTight®102 to 50 parts water in some especially tough cases.

Our recommendation: 1:100 on the final, quick wash down, which is standard operating procedure for all water-abrasive or vapor blasting and high-pressure water blasting.

RINSE CYCLE

Dilution ratios depend on the type of equipment you use, weather conditions, and the amount of contamination on the surface you are stripping.

MONEY-SAVING ONE-STEP APPLICATION

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Avoid multiple secondary abrasive or high-pressure water blasts to remove the rust bloom or soluble salts

- Saves clean-up and disposal costs
- Eliminates the need for sweep blasts, which generate dust
- Can reduce the amount of abrasive

Reduce work-flow interruptions

- Fewer set-ups, switching and re-scheduling of crews and equipment

Knock offs beware!

- Copy cat products on the market only create more headaches, don't actually perform and end in disastrous results.

Coating failures **CAN BE OFFSET**

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HoldTight®102 is the proven, low-cost protection against premature coating failure.

OVER 30 YEARS of EXCELLENCE

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KEN ROSSY
Vice President,
SALES & MARKETING

THANK YOU FOR JOINING US TODAY.

A COPY OF THIS PRESENTATION, ALONG WITH ADDITIONAL MATERIALS FOR YOUR REFERENCE WILL BE EMAILED TO YOU AT THE CONCLUSION OF THIS WEBINAR.

QUESTIONS?