

# *Compliance Strategies and Benefits*

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Operations Manager –  
Ohio Valley Region  
Tanknology Inc.  
November 7, 2013*



# Welcome

- Introduction Tanknology
- Proposed Revisions to Federal Regulations
- What we have learned over 15 years of testing
- Sump and Spill Bucket Testing and Repair
- Contact Information



# About Tanknology

**Tanknology Inc.** is the leading provider of fuel system compliance testing solutions in the United States. We provide compliance and inspection services to nearly 50,000 sites and 3,000 customer annually. We support a diverse customer base, ranging from large National oil companies, hypermarketers, and logistics companies, to regional distributors and single site owner/operators across 50 states.

## At A Glance

- Founded in 1988
- Tested over 1 million tanks
- Fleet of 125 service vehicles
- Responsible for compliance management at over 11,000 sites nationwide.



# Our Services

- **Compliance Testing**
  - Tank Line and Leak Detector
  - Helium Leak Pinpointing
  - Aboveground Tank Testing
  - Secondary Containment Testing
- **ATG Certifications**
  - System Installations
  - Operational Verifications
- **Cathodic Protection Services**
  - Impressed Current Systems
  - Sacrificial Anode
  - Design, Installation and Repair
  - PetroScope™ Video Inspection
- **Stage I and II Vapor Recovery**
  - Testing (A/L, PD, etc.)
  - PVVC
  - Owner/Operator Training
- **Tank Deflection Analysis**
  - Proprietary Method



# Our Services (cont'd)

- **Fuel Pure™ Fuel Filtration**
- **Ethanol Preparation Services**
  - Bottom Sweep
  - Water Injection and Removal
- **Site Inspection and Audit Services**
  - State Required Inspections
  - Customized Surveys
  - Compliance Inspections
  - Maintenance Assessments
- **Online Operator Training**
  - Class C Operators
- **Site Upgrades/Light Construction**
  - Spill Bucket Replacement
  - Sump and UDC Repair
- **Meter Calibration**



# Current Regulation

## Operator Training

- Requirement for A, B, C Operators at every Gas Dispensing Facility, or GDF.
- Requirements for certification for each level of operator
- Online Training Approved for OH
- Deadline: **August 8, 2012**



# *Proposed Regulations*

## **Operation and Maintenance (O&M)**

- Overfill prevention – tested ever 3 years
- Secondary containment tested every 3 years or continuous monitoring required.



# Proposed Regulations

## Overfill Equipment

- Vent valve flow restrictors (ball floats) will no longer be an option for overfill protection on new installations or during replacement. Grandfather these in?





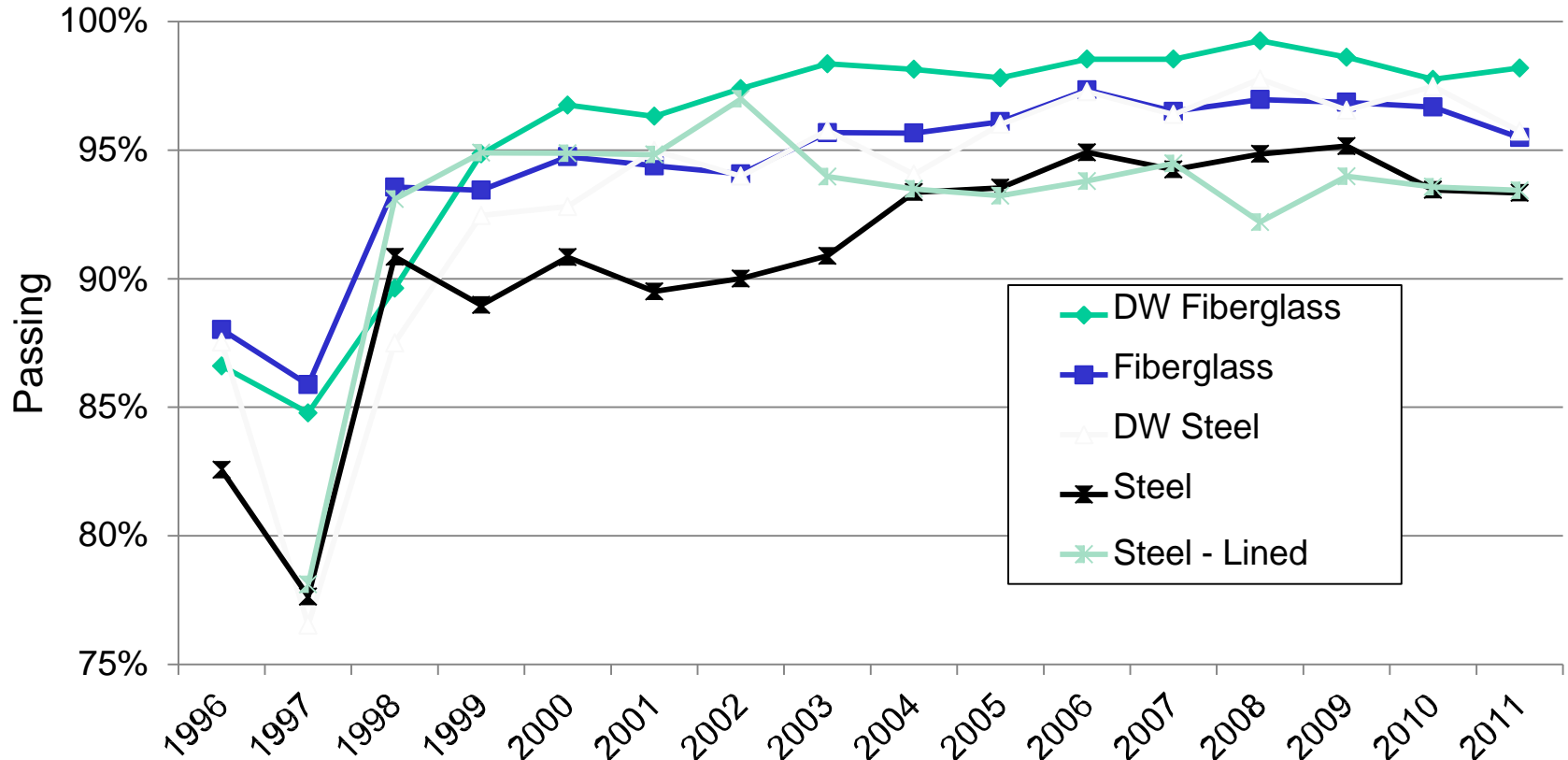
# 15 Years of Test Data

What Have We Learned?



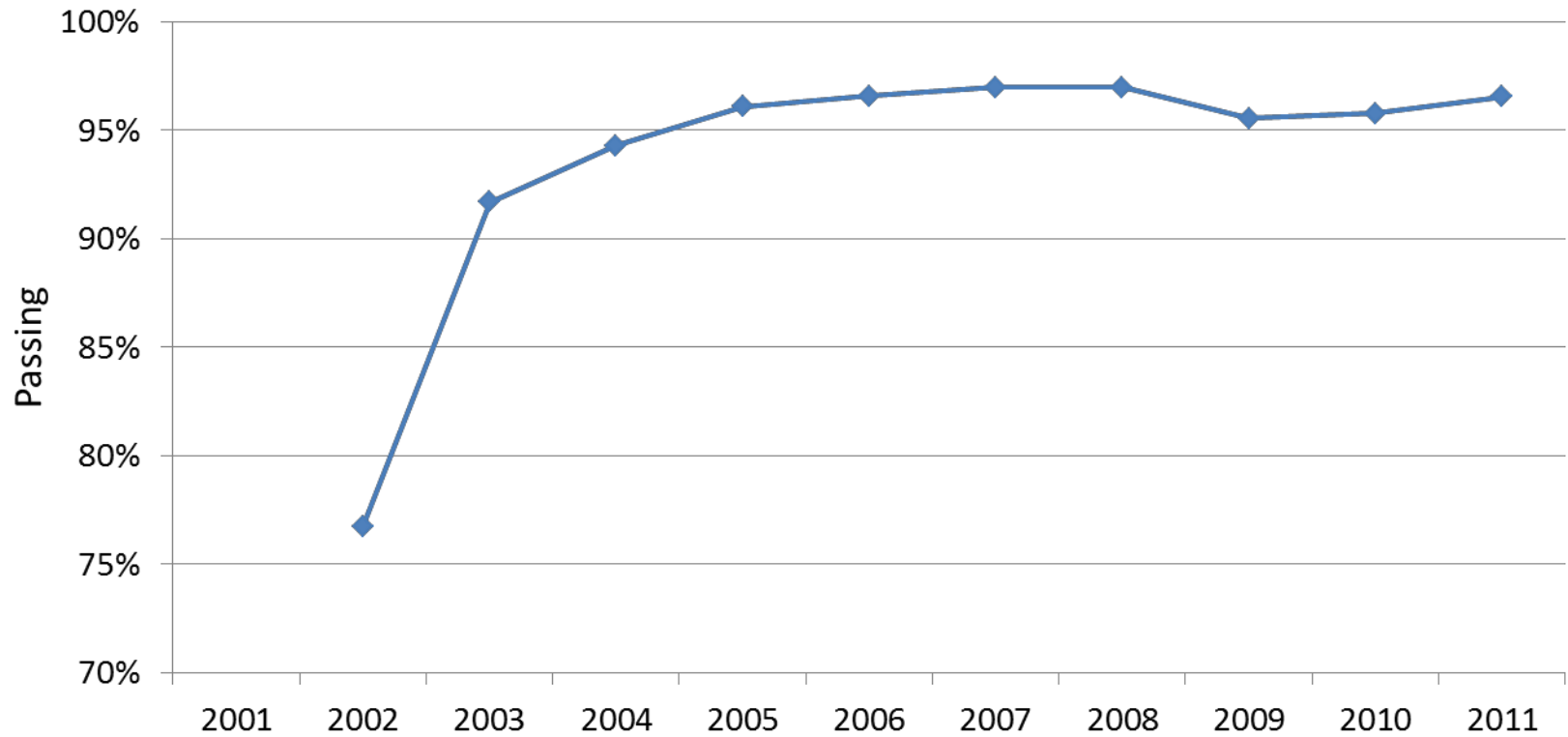
# 15 Years of Test Data

## Tanks from Late 90's to today



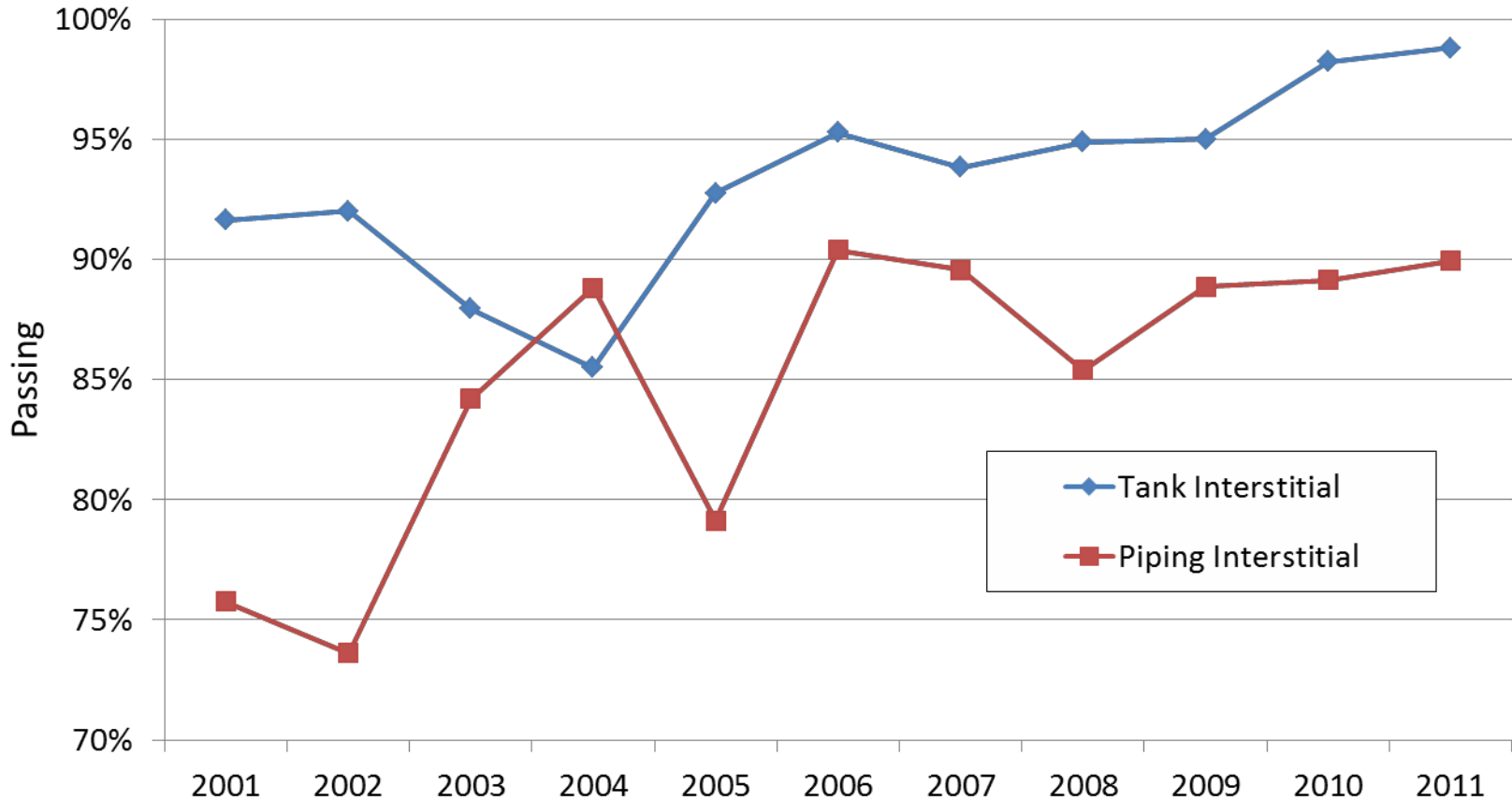
# 15 Years of Test Data

## Spill Containers in California



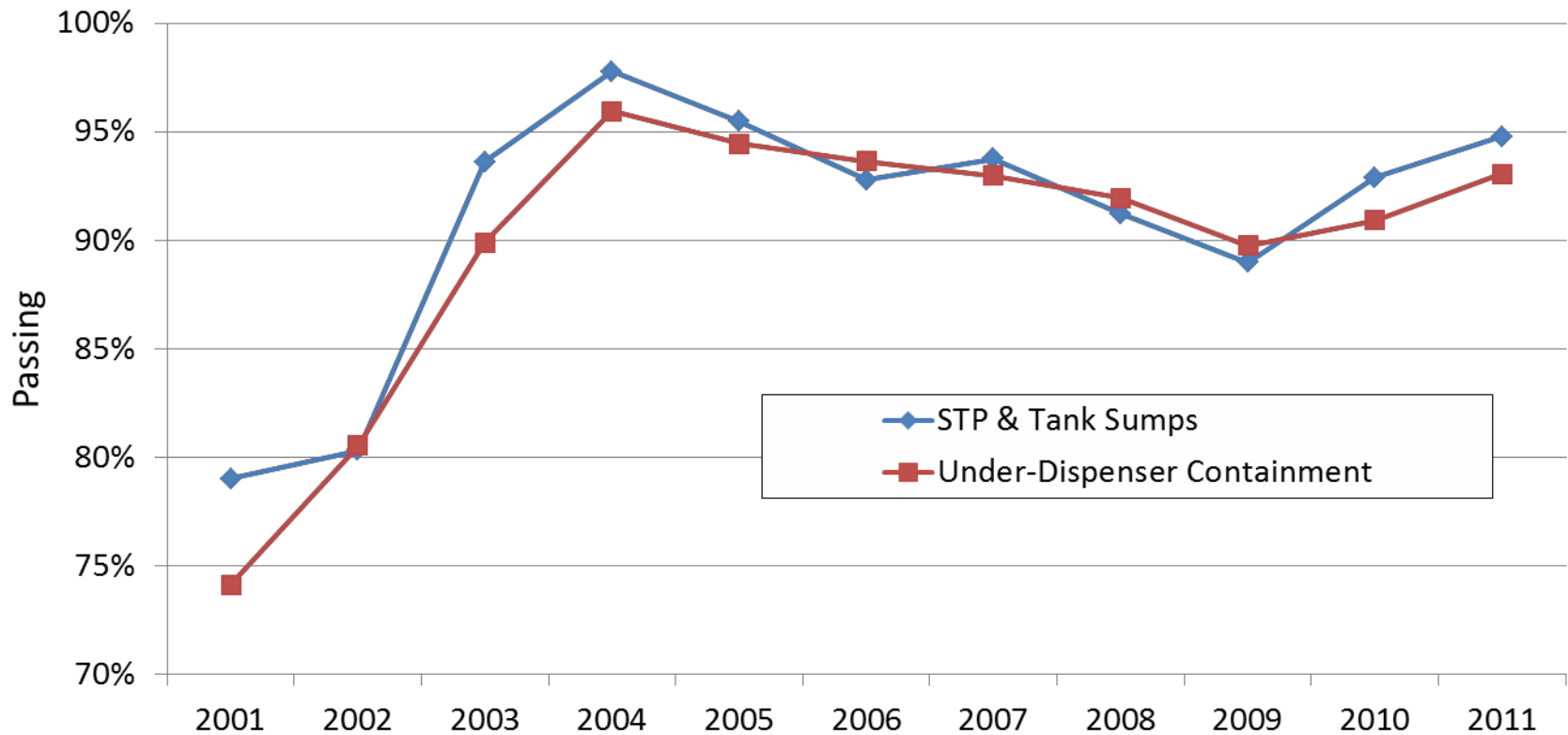
# 15 Years of Test Data

## Tank and Piping Interstitials in California



# 15 Years of Test Data

## Tank Sumps and Under-Dispenser Containment in California



# ***Best Practices***

## **Two Ways To Manage Forecourt Compliance**

Self Manage/ Manage by Exception

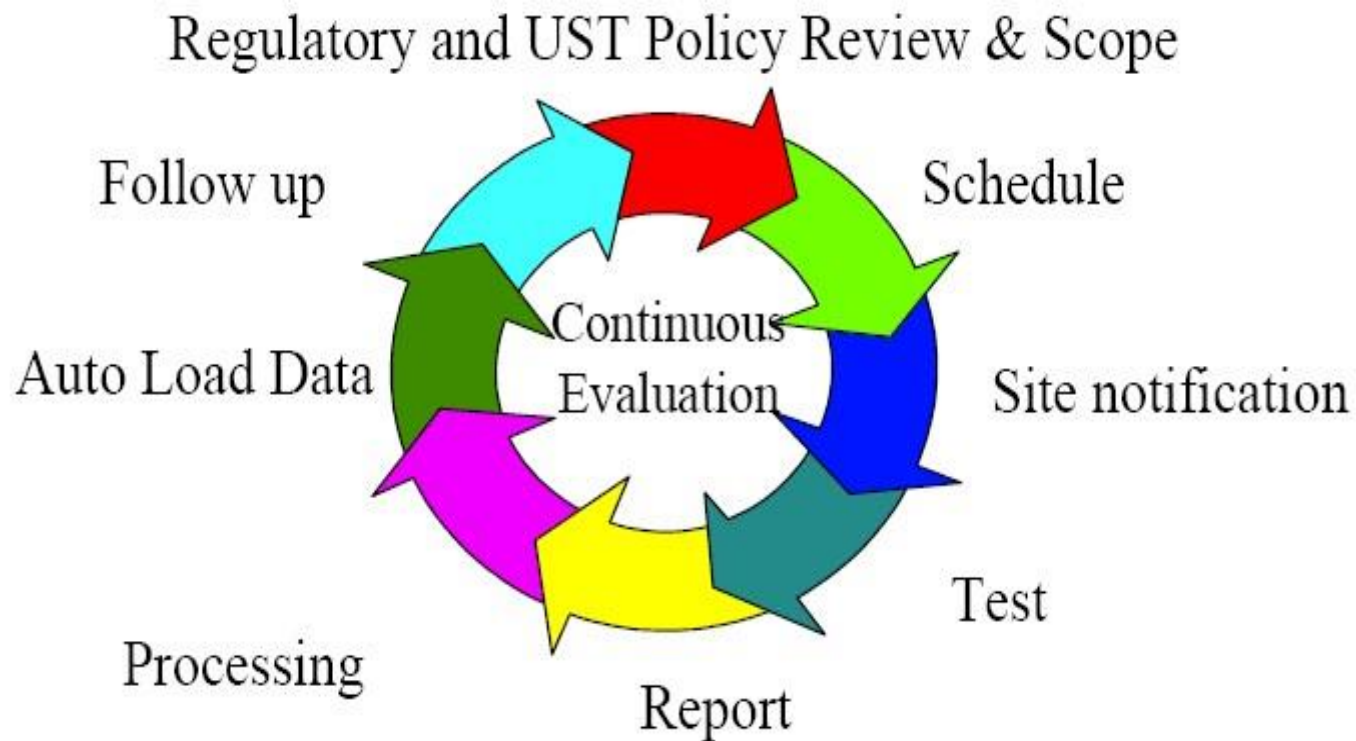
Wait for the NOV to Arrive

**-OR-**

Implement a Proactive Compliance Program,  
Operator Training, Periodic Inspections  
and Required Testing



## Tanknology's Compliance Management Model





## Tank Sumps



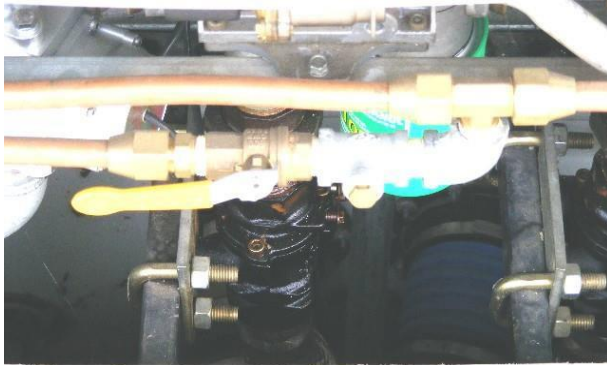
- Sump must be kept clean and dry.
- Sensor must be at the lowest point.
- Sensor must be in a straight up and down position.





# Best Practices

## Dispensers



- Dispenser pan must be kept clean, dry, free of leaks.
- Check hanging hardware for cracks or leaks. (hoses, nozzles, break-a-ways etc)
- Sensor must be at lowest point.
- Sensor must be straight up and down.



# Sump and Spill Bucket Testing and Repair

- Potential Issues with Leaking Sumps and Spill Containment
- Repair & Equipment Options
- Tanknology's Experience & Typical Repair Process



# *What Kind of Problems Occur?*

- Groundwater enters sumps through leaks
- Sumps fill with water when it rains
- Costly pump-outs
- ATG and sump sensors in alarm
- Leak Detection equipment not functional
- Pumps, piping, and monitoring equipment suffers corrosion and deterioration
- NOV's and fines





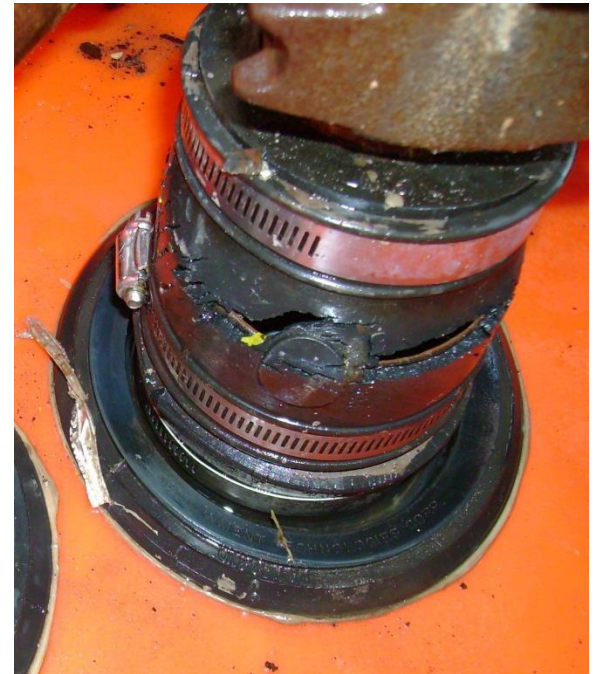
# *Effects of Water in Sumps*

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# ***Causes of Leaks and Water Intrusion***

- Cracks and penetrations
- Torn, ripped, or missing entry boots
- Dislocation of mounting donuts
- Degradation of nitrile rubber and other seals
- Sump bung adapter (floor)
- Seam of collar & sump riser
- Non watertight or poor fitting lids
- Missing gaskets
- Manhole covers allow water to penetrate





# Why Tight Sumps Are Important

- Avoid cost of water pump-outs
- Detect any leak of product into the sump
  - Prevent product release into ground
  - Prevent contamination of environment
  - Avoid cost of environmental clean-ups
- Allow for inspections and functionality testing
- Prevent compliance violations and/or fines
- Extend life of pumps, piping, and monitoring equipment



# ***Equipment & Repair Options***

- **Tanknology Experience**

- PTI (Prevention Technologies) Repair Paste
- UnitLiner Repair Paste
- Icon/BlueLine Split Repair Boots
- Diversified Split Repair Boots
- ECP/EPP Sump Shield Retrofit Cover
- NEF (National Environmental Fiberglass) Retrofit Cover
- Universal Valve Retrofit Cover
- Emco Retail (Spill Container Retrofit)

- **Other Options**

- Bravo Retrofit Cover
- CNI Retrofit Cover
- Franklin (Phil-Tite) Spill Container Retrofit
- RhinoTite Retrofit Cover



# Prevention Technologies PTI

- Originally developed at Amoco Research
- Advanced polysulfide used as pour-in-place retrofit containment.
- Amoco realized that 85% of all contamination is at the fill, under dispenser & submersible.
- Impervious to gasoline, E-85,
- Compatible with most materials.
- Great sealant for cracks, gaps





# *Prevention Technologies*

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# *PTI Paste*



# Blueline Technologies



Blueline Technologies

An RRM Holdings, LLC Company



## PRODUCTS & SUMP REPAIR SOLUTIONS

### NEW CONSTRUCTION FITTINGS

#### K1 Series Single Sided Penetration Fittings

K2 Series fittings for Continuously Monitored Double Wall Sumps & Single Wall Sumps

ADKro Double Sided Kwik Fit fittings for Curved or Flat Single Wall Sumps

UV-K1-L-Series Penetration Fittings for Above Ground Applications

K1-L-Double Sided Kwik Fit fittings for Single Wall Hat Sumps

KFOC, Oouhl" Sirtpci Kwik Fit Fittin'J' fnr-Singl" Wnll Curv P.# Sump,.

PED & PEDC S.,-ie" Padi.,liodll" Filays fur 6" & 8" Pipe

PER Series p.,Ue lodn" R"duLers / T"sl R"du:,rs

PER Series Pellethane Caps

PEI Series Pellethane Inserts

ER Series Alcryn Reducers / Test Reducers & Corrugated Duct Seals

### SPLIT REPAIR FITTINGS

SB Series Pellethane Split Repair Boots

SBTCI Split Repair Boots for Total Containment Fittings

SBTCIF Split Repair Boots with Fill Tube for Total Containment Fittings

T Non-Split Repair Boots for Total Containment Fittings

TC F Non-Split Repair Boots with Fill Tube for Total Containment Fittings

SI Series Pellethane Split Inserts & S Series Dam Stops

SR Series Pellethane Split Reducers / Test Reducers

### EASY RISER - JOINTED VENT RISER

Easy Riser Jointed Vent Riser

### SEALANTS & BONDERS

Bostik IIO OFS

Parasealant 626

Petrol-Seal

Polyfusion

Blue Bond 801

Blue Fill 4036

Fast Foam & Hydro Active Safe Foam

Blue Seal Glue & Ant -Corrosion Damp Spray

Sealant Wipes & Static Mixers

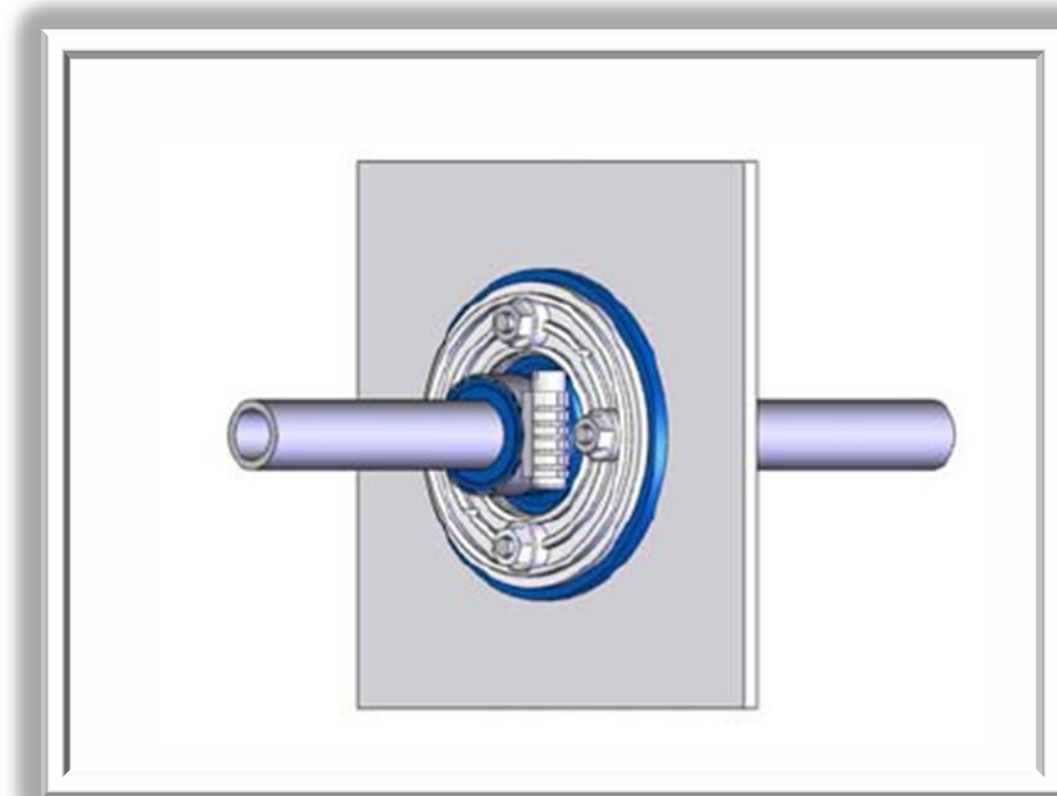
### WATERTIGHT RETRO-FIT SUMP LIDS & VACUUM TEST KITS

Watertight Retro-Fit Sump Lids

Magnum VI Vacuum Test Kit



# ***Blueline Technologies - Videos***

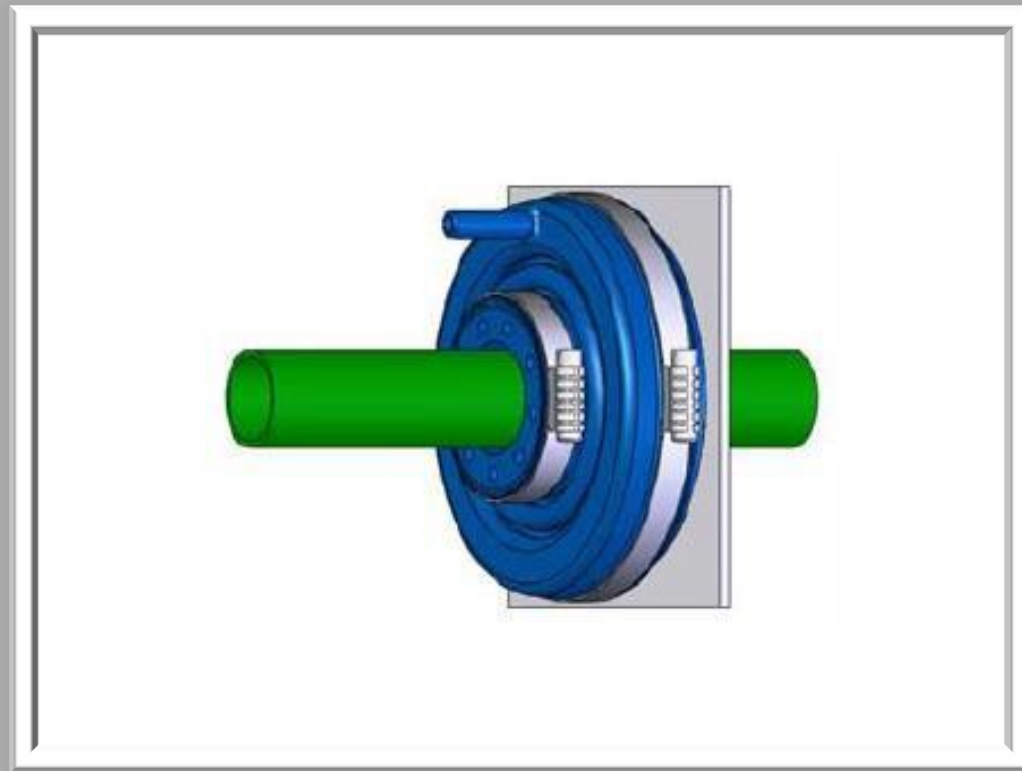


**ELECTRICAL REPLACEMENT REPAIR  
SB Series Pellethane Split Repair Boots**





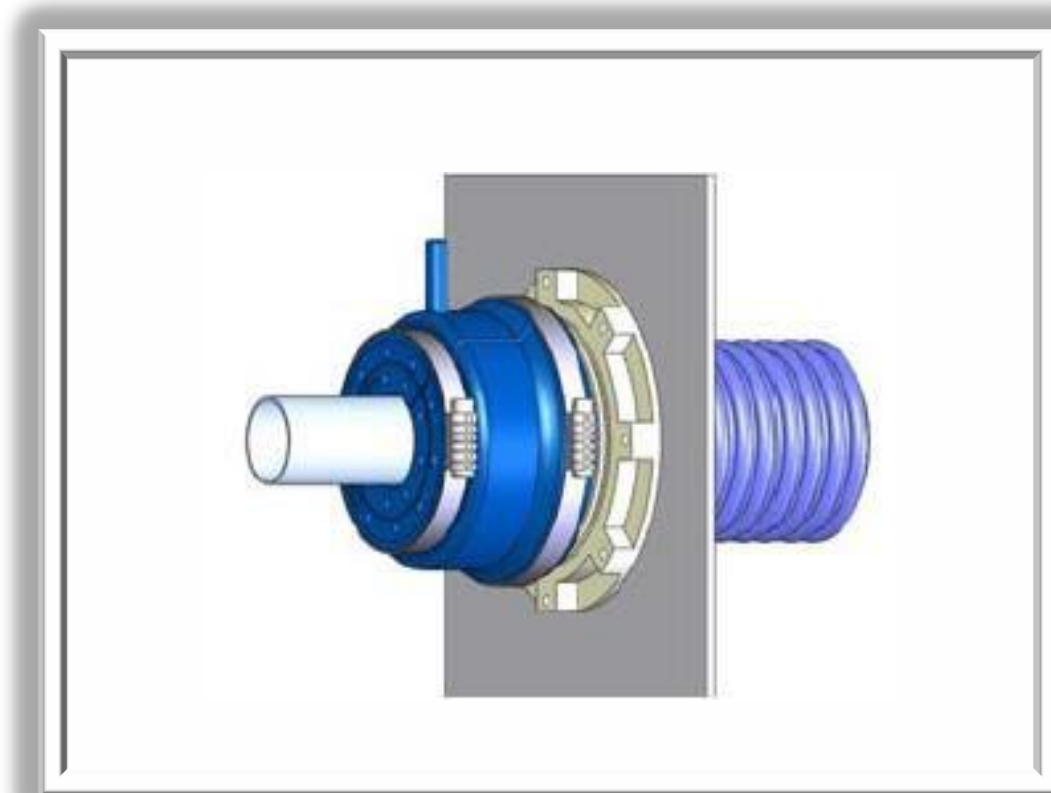
# *Blueline Technologies - Videos*



DIRECT REPLACEMENT REPAIR  
SB Series Pellethane Split Repair Boots



# ***Blueline Technologies - Videos***



**TCI SPLIT REPAIR**  
For Damaged TCI Fittings



# Diversified Products



## Diversified Products Manufacturing, Inc.



<a href="#">Home</a>
<a href="#">About Us</a>
<a href="#">What's New</a>
<a href="#">Products</a>
<a href="#">Price List</a>
<a href="#">Certified Installers</a>
<a href="#">Employment</a>
<a href="#">Contact Us</a>
<a href="#">DPM Literature</a>

### Product Families

Diversified Products Manufacturing has sold over one million Penetration Fittings since 1991 and currently has an acceptability rating of better than 99.999%. The Alcrin materials used in DPM products have been tested to 1996 Protocols and the Fuel-Thane materials have been tested to 2005 Protocols by a nationally recognized testing laboratory. All DPM's products carry a 3 year warranty, an optional 20 year warranty is available upon request.



[Click to open in PDF](#)

#### Threaded Penetration

[More details](#)

Cost Effective Installation - 1 Hole to Drill  
All Pipe Sizes 1/2" through 4.5"



[Click to open in PDF](#)

#### Inverted Stud Plate E&Rinates Leak Patches

[More details](#)

Inverted Stud Plate E&Rinates Leak Patches from sump in:erier  
Traditional Stud:led Penetrations Available  
Sizes Available 1/2" through ..



[Click to open in PDF](#)

#### Termination and Test Fittings

[More details](#)

- For all Double Walled Steel Wona.ide
- Molded in Air Test Valves
- 10 PST Nld.35PSIG Rot.O Reducor ..



[Click to open in PDF](#)

#### Spill Repair Patches

[More details](#)

- Direct over the Stud Repair Models for Environ Boots
- Repairs for all Manufactures of Fittings



[Click to open in PDF](#)

#### Isolation Patches

[More details](#)

- Sump Adapter Kits
- Riser Isolation Kits
- Spill Container Liners



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#### Stainless Steel and Polyethylene Products

[More details](#)

- Polyethylene - Liquid Tite
- Polyethylene Isolation Mats



#### Industrial Protection Products and Corrosion

[More details](#)

- Custom Fabricated Steel 16" Flat Roof Sods
- Terminating and Test Reducers for Large Double Walled Pipes

Other important links  
[DPM Product Warranty](#)  
[Product Views](#)  
[Contractor Calllog](#)  
[DPM MSDS Files](#)



# *Piping Entry Boot and Test Boot*





# *Split Boot Repair*



# *Conduit Entry Split Boot Repair*

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# Conduit Entry Split Boot Repair



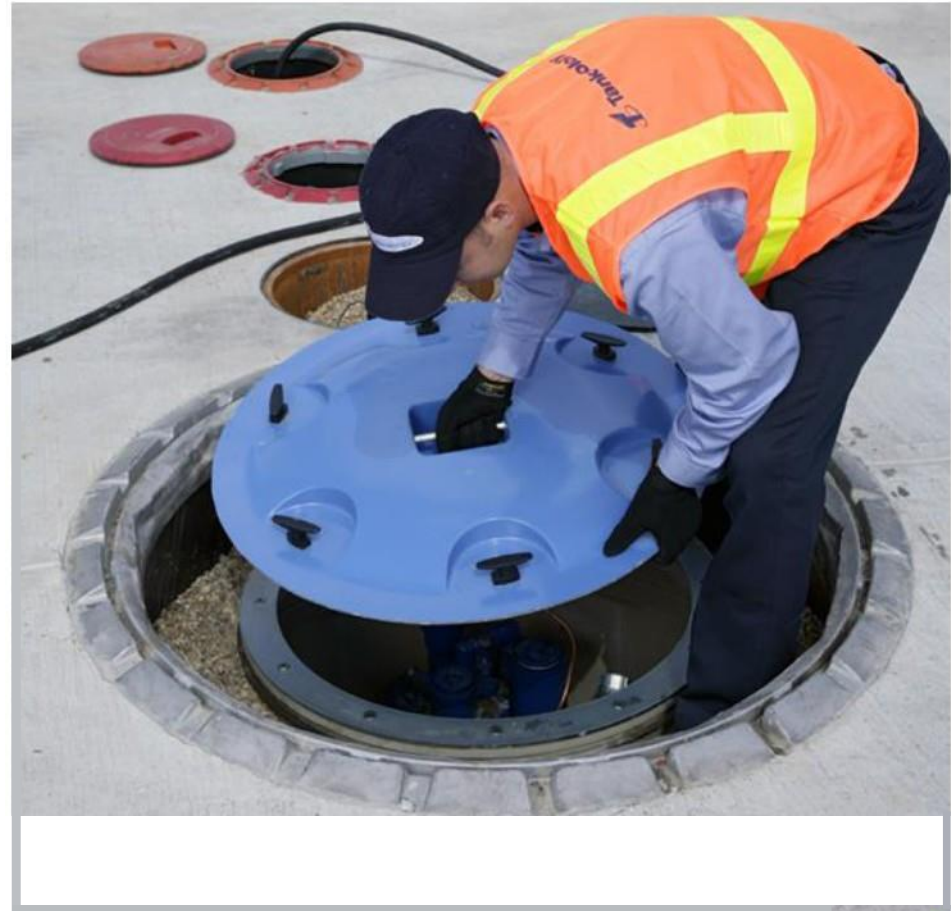
# Sump Shield Retrofit Lid

Manufactured by  
Environmental Containment  
Products (was Environmental  
Protection Products – EPP)

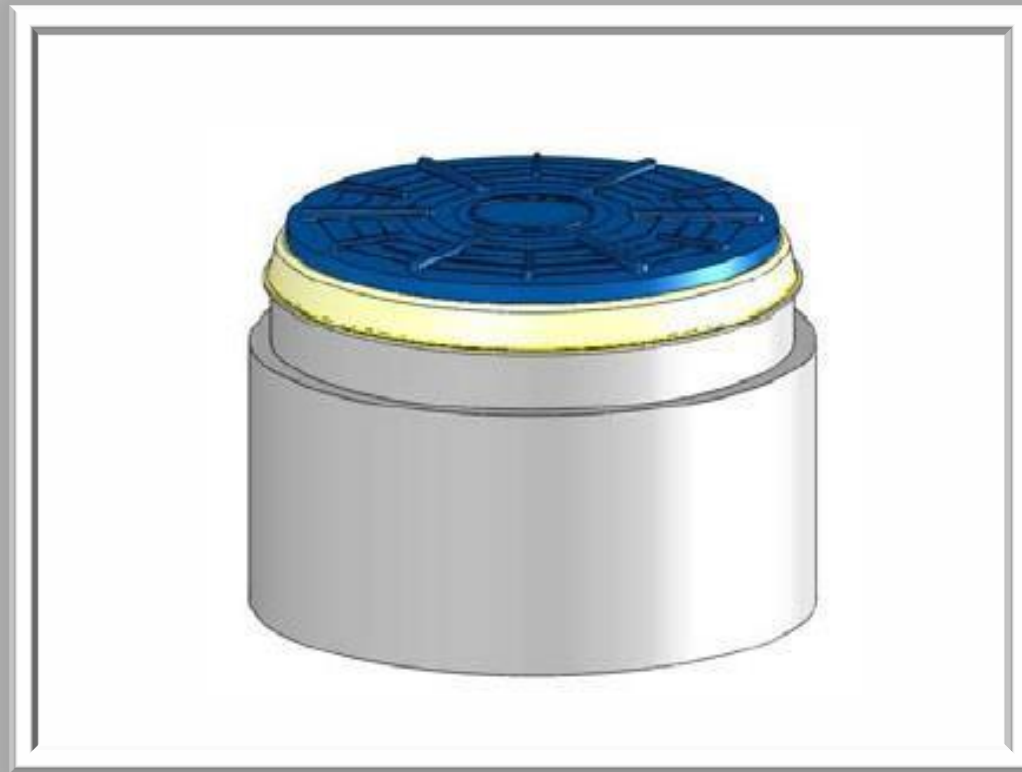




# Sump Shield



# ***Water-Tight Lid Replacement***



**WATERTIGHT RETRO-FIT SUMP LIDS**  
For Poly Sumps



# National Environmental Fiberglass

## ADVANTAGE Water Intrusion Lids



*Seals water out of sumps*

UL Listed  
Compression  
Seal

Strong Composite  
Material

**QUICK FIX  
RETRO LID**

Fits FRP & poly  
1 Hour  
Installation

# NEF

National Environmental Fiberglass, L.L.C.



www.NEFProducts.com  
Email: NEFProducts@aol.com  
Phone: 760-246-0648



NEFProducts.com

Marty Roelle

(760) 246-0648

9444 Cassia Rd

Adelanto, CA 92301

[www.nefproducts.com](http://www.nefproducts.com)

# Universal Valve



**The Most Complete Line of UST/AST Products!**

## SUMP COVER

**NEW!**

## UNIVERSAL SUMP RETROFIT COVER

### Application -

Eliminates leaking polyethylene and fiberglass sump covers without breaking concrete.

### Part Number - 1943



### **Features-**

- ✔ Installs in minutes
- ✔ Rugged steel ring and cover for maximum strength
- ✔ Mechanical seals insure maximum life and tightness
- ✔ Field Adjustable Clamping device
- ✔ Does not rely on glues or adhesives that deteriorate after 1 year

**UNIVERSAL  
Advantage**

Only Universal's retrofit cover truly eliminates water leakage. Our **DOUBLE SEAL** design keeps your sumps completely dry!

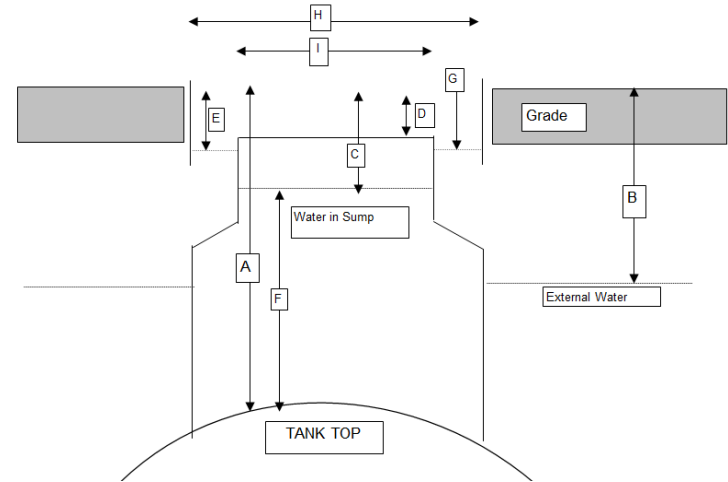
**UST Regulations require that all of the components of a UST system be tested for "product tightness"**





# Initial Survey

- Conduct site survey to identify necessary repairs
- Check groundwater level to see if same as in sump
- May require water pumpout
- Take necessary measurements
- Perform testing as necessary to identify leaks
- Determine best repair options



Dimensions	Date:	Sump 1	Sump 2	Sump 3	Sump 4
	Product (R, M, P, D, K)				
	Sump on (STP, Fill, Other)				
A	Grade to Sump bottom				
B	Grade to external water <i>(Critical item)</i>				
C	Grade to water in sump				
D	Grade to top of sump riser				
E	Grade to percolation area				
F	Inches water in sump				
G	Inches water in percolation area				
H	Manhole skirt ID				
I	Sump riser OD				



# CHOOSE YOUR WEAPONS

- Each sump requires careful attention and a thoughtful decision.
- Each sump is different. Fiberglass? Poly? Different pipe entry fittings? No conduit seal-offs? Manhole ring draining into soil? High water table preventing repairs?
- Pellethane split boots
- PTI paste
- Aqua seal
- Water-tight lids
- Tanknology VPLT test.



# Sump Repair Process



24 11:28



# Water Removal

- Barricade the area. Safety First.
- Pump water to Tote tank for Disposal





# *Safety- 02/LEL Meter Readings*

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# *Initial Cleanup*



# *Powerwashing*





# *Clean and Dry - Ready to Repair*

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# *Sump Lid Problems?*



# *Attach Compression Bracket*

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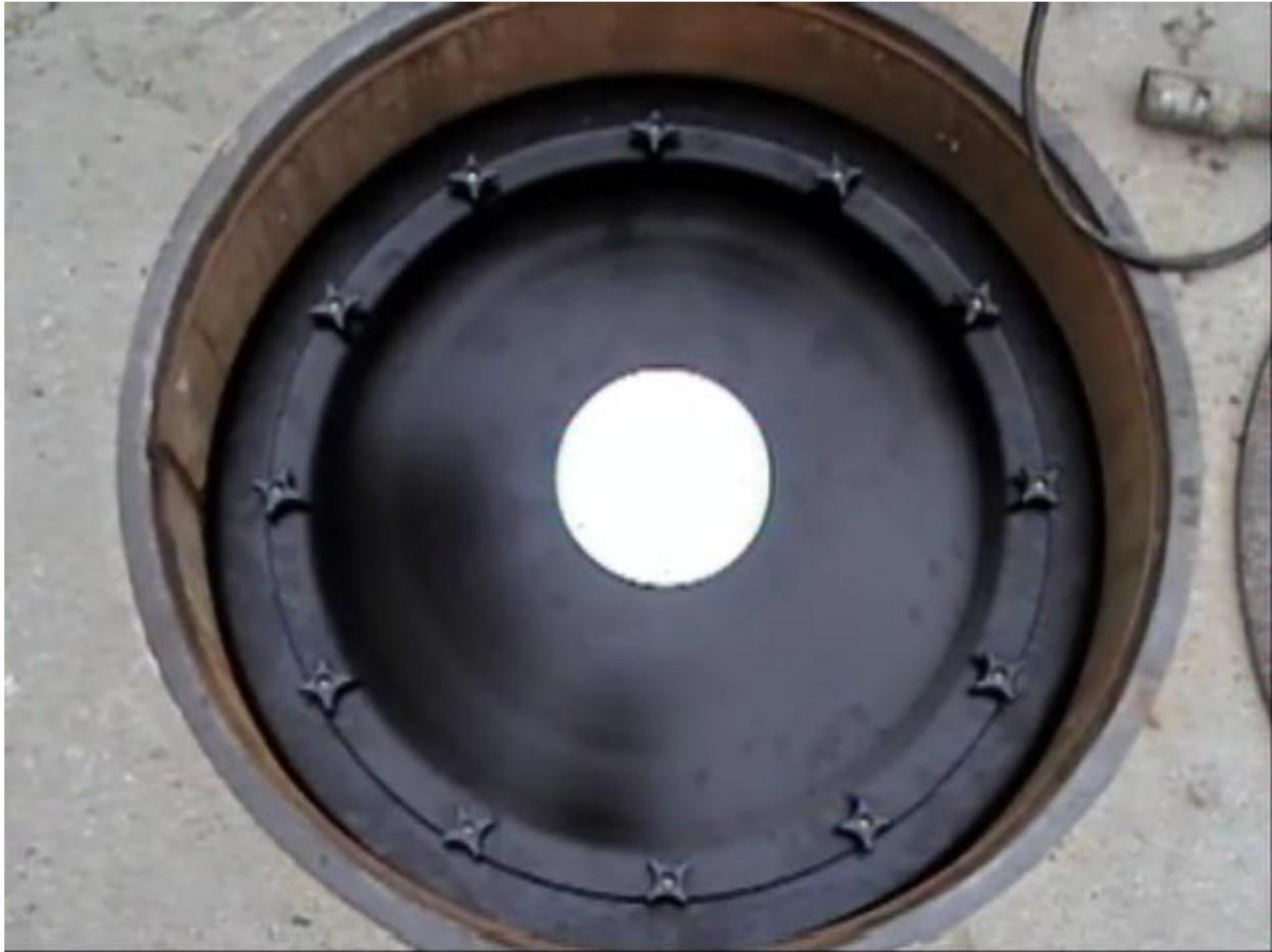
# *Install support ring and gasket*

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# *Watertight lid with inspection port*



# *Paste and Retrofit Cover*

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# *Paste and Retrofit Cover*





# *Paste and Retrofit Cover*





# Sump Testing

VPLT – Accelerated Electronic Hydrostatic Test developed by Tanknology



# Sump Testing Options

Options include:  
Incon TS-STS and  
Sherlock Vacuum Tester





# Spill Container Test



# Emco Spill Container Retrofit

**EMI:D**®  
WHEATON RETAIL

**A1005-505**  
Replacement Stainless  
Steel Spill Containment

**Repair your Spill Containment  
with Stainless Steel**  
*Never Break Concrete*



## A1005-505 Replacement Stainless Steel Spill Containment

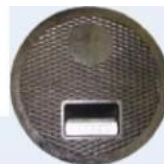
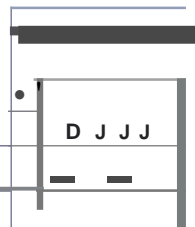
- Containment vessel completely isolates old manhole
- Lid seals inside stainless steel vessel

Cast Iron Cover  
With Triple Seal

Stainless Steel  
Containment Vessel

Stainless Steel Bolts

2 Piece Stainless  
Steel Angle  
(.ring Seal



*Patent  
Pending*







***Thank you ...***

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