



American
Petroleum
Institute

Preliminary Program

2021 API Storage Tank Conference & Expo

October 13-14, 2021 | Grand Hyatt Nashville | Nashville, Tennessee, USA | www.api.org/storagetank

*As of September 30, 2021 | Agenda subject to change

Wednesday, October 13, 2021

7:30 am – 8:30 am

Registration, Continental Breakfast, & Exhibit Viewing

8:30 am – 8:40 am

Welcome: Opening Remarks and Safety Moment

2021 Conference Co-Chairs:
Dave Cushman, West Virginia Paint, LLC
Earl Crochet, Crochet Midstream Consulting

8:40 am – 9:30 am

Session K1: Keynote – SPCC and FRP Plan and Implementation Deficiencies related to 40 CFR part 112 Compliance

The Environmental Protection Agency (EPA) conducted an internal quality and consistency review of a sample of Spill Prevention, Control, and Countermeasure (SPCC) Plans and Facility Response Plans (FRPs) required under 40 CFR part 112. The review was to inform the Agency's continued outreach to provide regulatory clarity and improve SPCC and FRP compliance. EPA surveyed regional offices for data related to SPCC Plans and FRPs reviewed during routine compliance monitoring activities for Fiscal Years 2018 and 2019. Facilities with identified Plan deficiencies were reviewed in order to assess Plan inconsistencies with the applicable rule requirements, and EPA subsequently developed a fact sheet showing the most frequent deficiencies found. This presentation will provide details and examples of the most common SPCC and FRP Plan deficiencies with the aim of clarifying SPCC and FRP requirements and improving compliance at regulated facilities.

Speaker: Mark Howard, US EPA, and Troy Swackhammer, US EPA

9:30 am – 9:50 am

Morning Refreshment Break & Exhibit Viewing

9:50 am – 10:20 am

SESSION 1: Goldilocks for tanks; not too much, not too little, just right

Moderator: Brock Trotter, PEMY Consulting

How can you: lower your risk of being out of compliance with new regulations; lower your risk of an incident; and optimize your daily operations of your tanks.

Speaker: Earl Crochet, Perceptive Sensor Technologies

10:20 am – 10:40 am

Morning Refreshment Break & Exhibit Viewing

10:40 am – 11:50 am

SESSION 2: Mildew Resistant Coating for Ethanol Storage Tanks

Moderator: Ron Santelik, Rowell Chemical

Mildew growth on ethanol storage tanks pose aesthetic and maintenance issues for owners/operators. Mildew on the exterior of these tanks also impacts the overall energy efficiency and sustainability of these tanks. The black mildew growth causes the temperature of the contents to rise and accelerates the loss of product through evaporation. The Sherwin-Williams Microbiology Resource Center partnered with an owner/operator of these storage tanks to sample and isolate the specific fungi responsible for the defacement. A 2K epoxy formulation that resists exterior mildew growth for 48-60 months, depending on environmental conditions, was developed. Polysiloxane and polyurethane coatings are also under development.

Speaker: Tony Rook, Sherwin Williams



SESSION 3: Go with the Flow (Primer): Myths and Truths about Lining Pitted Steel Tank Bottoms

Moderator: Amy Baxter, Enbridge Inc.

Corrosion in tank bottoms is the pits, literally. But new "flow primer" technology can help mitigate these corrosion challenges while following the recommendations of API 652/653. We'll dispel myths and uncover truths about this rapidly evolving technology and critical step to protecting assets. Join us to discover how these linings support asset integrity programs and keep owners on the cutting edge of tank bottom repair technology.

Speaker: Justin Manuel, Carboline

11:50 pm – 12:40 pm

Lunch

12:40 pm – 1:00 pm

Exhibit Viewing

1:00 pm – 1:45 pm

SESSION 4: Acoustic Monitoring of Aboveground Storage Tanks (ASTs) for Leaks and Bottom Plate Corrosion

Moderator: Earl Crochet, Crochet Midstream Consulting

Modal Acoustic Emissions and Guided Wave Ultrasound are non-invasive, in service, API inspired methods of leak detection and bottom plate assessment that capitalize on modern electronics, digital processing and sensors designed specifically for AST monitoring. Both have been embraced by the Navy and NASA and have evolved to the point of affording owners/operators a cost effective method for monitoring AST's that could give cause to re-examine current AST life cycle management protocols.

Speaker: Steven Ziola, Antech Systems, Inc.

1:45 pm – 2:00 pm

SESSION 5: STI vs API Tank Inspection and Repair Standards, what are the differences and when do you use each

Moderator: Matt Van Alsbury, Advance Tank and Construction

Storage Tank systems require proper inspection and maintenance to comply with regulatory and business obligations. A tank inspector may have more than one choice in inspection and repair standards when evaluating a storage tank system. In some circumstances more than one inspection process may work, but one may be more appropriate. This presentation will give inspectors needed information to apply the most appropriate inspection standard to a particular storage tank system.

Speaker: Joe Mentzer, STI/SPFA

2:00 pm – 2:20 pm

Afternoon Refreshment Break

2:20 – 3:10 pm

SESSION 6: Evidence Based Risk Based Inspection for Storage Tank Facilities

Moderator: Joe Mentzer, STI/SPFA

This talk will show participants how to use data and evidence to perform risk-based inspections that will change the internal inspection interval by either increasing or decreasing it, but at the same time provide less risk than a prescriptive time based approach that most companies use as outlined in API 653. It will show how partial knowledge can be used to gain a better understanding of what the corrosion rate process is for a particular tank bottom and allow for either increasing or decreasing the interval.

Speaker: Phil Myers, PEMY Consulting, Inc.

3:10 pm – 3:30 pm

Afternoon Refreshment Break

3:30 pm – 4:50 pm

SESSION 7: API Standards Update



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Moderator: Phil Myers, PEMY Consulting

An update on the latest API tank related standards

Speaker: Jose Godoy, API

SESSION 8: API TR 655 is Published! What does this mean for tank bottom corrosion protection?

Moderator: Mark Kachelmyer, Kinder Morgan

API TR 655 is a newly published document focused on the use of Vapor Corrosion Inhibitors (VCIs) under AST floors. The document provides guidelines on when VCI may be an appropriate option for corrosion mitigation and how it can be applied under a variety of foundation designs. Monitoring, limitations and compatibility with CP are also covered.

Speaker: Kelly Baker, Zerust Oil & Gas

SESSION 9: Are Tank Bottom Coatings Preventing Tanks from Being Grounded?

Moderator: Larry Foster, Marathon Petroleum

Coatings are spark tested to determine if applied properly. Does the coating prevent tank bottoms from being grounding?

Speaker: D'arcy Trask, Gauge Point Calibration

4:50 pm – 5:00 pm

Wrap Up of Day One

2021 Conference Co-Chairs:
Dave Cushman, WV Paint
Earl Crochet, Crochet Midstream Consulting

5:00 pm – 6:30 pm

Welcome Reception, Exhibit Viewing, & Networking

Thursday, October 14, 2021

8:30 am – 8:40 am

Opening Remarks and Safety Moment

8:40 am – 9:30 am

Session K2: Keynote – Surviving a Fatal Accident

On May 30, 2008, we experienced a tragic accident that resulted in two worker fatalities. Anyone, whether a manager, supervisor, or co-worker, is never the same. The effect it has cannot be described but can only be experienced. A former customer said that smaller companies that experience such a tragic event either fold up or emerge stronger and better than before. This presentation explores that path, and how by understanding human factors and the significant role they play in safety programs can help prevent these from occurring, but if they do, to enable firms to survive the fatality.

Speaker: Dave Cushman, WV Paint

9:30 am – 9:50 am

Morning Refreshment Break & Exhibit Viewing

9:50 am – 10:20 am

SESSION 10: Direct Assessment on Aboveground Storage Tank Bottoms

Moderator: Peter Williams, Concord Tank Corporations

Economic pressures to return the tank in service continue to persist while at the same time staying in compliance and protect the environment. With direct external assessment, asset owners can quickly pinpoint the cause, and the type of corrosion present before the tank is put back in service.

Speaker: Nelson Gathi, Code Steel Industrial Inspections



SESSION 11: Strategic Tank Data

Moderator: Andrew Yearwood, PEMY Consulting

Wanting to start down that journey using AI and Computer Vision Technology with your aboveground storage tank assets? Based upon our experience, you better make sure your tank data is in a condition to provide you with "Meaningful Insight".

Speaker: George Gregory, Virtual Tank Solutions

10:20 am – 10:40 am

Morning Refreshment Break & Exhibit Viewing

10:40 am – 11:50 am

SESSION 12: Qualification of new technologies for monitoring the integrity of storage tank floors

Moderator: Kelly Baker, Zerust Oil & Gas

The drive towards digitalization of asset integrity management is leading to a need for new continuous Structural Health Monitoring (SHM) technologies in place of periodic in-service inspections and Non-destructive Testing (NDT). This presentation will illustrate how new SHM technology can be qualified using a guided wave ultrasonic method for monitoring corrosion in storage tank floor plates as an example.

Speaker: Graham Edwards, TWI

SESSION 13: Performing API 653 Repairs of Storage Tanks Using Carbon Fiber Reinforced Polymer (CFRP)

Moderator: Mark Howard, US EPA

Carbon Fiber Reinforced Polymer (CFRP) was approved for use in the May 2020 publication of API 653 under section 9.4 and Annex J. CFRP has been widely utilized for repair of pressure pipe and vessels with guidance provided by ASME PCC-2. The approval gives Operators more options for repairing storage tanks. This presentation offers attendees specific information on how to approach the design, installation, and inspection of CFRP repairs to ensure positive outcomes.

Speaker: Olley Scholer, HJ3 Composite Technologies

11:50 pm – 12:40 pm

Lunch

12:40 pm – 1:00 pm

Exhibit Viewing

1:00 pm – 1:45 pm

SESSION 14: Special Foundation Design

Moderator: Mark Jordan, CB&I

This presentation will cover the design and construction of quality foundations for aboveground storage tanks. The topics to be discussed include the importance of the geotechnical investigation and report, a review of the good foundation selection and design practices provided in PIP STE03020 Guidelines for Tank Foundation Designs, the control of tank settlement through the use of proven settlement guidelines, and aboveground storage tank foundation design and construction issues on difficult sites.

Speaker: Greg Soules, CB&I

1:45 pm – 2:00 pm

Afternoon Refreshment Break & Exhibit Viewing

2:00 pm – 3:10 pm

SESSION 15: EFR to Cone Roof - Emissions and Design Benefits

Moderator: Mike Brockway

Learn the long-term emissions benefits, extended floating roof life, and safety provided by converting an EFR tank to a traditional IFR.

Speaker: Austin Pace, Consolidated Fabrication and Constructors



SESSION 16: Is the Juice Worth the Squeeze? State Regulations for Aboveground Storage Tanks Beyond Industry Wide Practices and Inspections

Moderator: Daniel Fleck, Kinder Morgan

Environmental regulations are always being updated with additional tasks required by AST owners and operators. It is prudent to understand the regulations in the more stringent states to be prepared for the future. One may be able to advise and comment to the regulatory agencies on the efficacy of proposed regulations.

Speaker: Robert May, Montrose Environmental

3:10 pm – 3:30 pm

Afternoon Refreshment Break & Exhibit Viewing

3:30 pm – 4:50 pm

SESSION 17: A Deep Look at Floating Roof Design and Analysis

Moderator: Dave Nadel – Chevron

Floating roofs are notoriously challenging to design and analyze. No two roof designers agree on calculation methodologies and assumptions, leading to an abundance of unique and proprietary designs. Roofs often experience non-standard loads, such as vapor formation under the deck, that can cause the roof to behave in unexpected ways and potentially sink. This presentation will offer comparisons, insights, and best practices to help you understand how to set up accurate floating roof studies.

Speaker: Andrew Yearwood, PEMY Consulting

SESSION 18: Self-Performing Multiple Different Heavy-Plate Scopes of Work on Mega Projects

Moderator: Rafael Rengifo, Becht

Industry trends show that government regulations are trending towards inclusion of increasing environmental requirements surrounding sustainability and carbon footprint. It is becoming increasingly clear that contractors and owners will need to satisfy more stringent environmental requirements as part of their design, build, and operating plans. We will discuss some of the unique challenges faced during work on several different tank configurations with differing governing standards within a single project.

Speaker: Thomas Terrell, Bechtel Energy

4:50 pm – 5:00 pm

Closing Remarks

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Earl Crochet, Crochet Midstream Consulting

5:00 pm – 6:00 pm

Closing Reception and Networking