American Petroleum Institute | Preliminary Program

2025 API Storage Tank Conference & Expo

October 20-23, 2025 | Sheraton Phoenix Downtown in Phoenix, Arizona | www.api.org/storagetank

**As of September 2, 2025 | Agenda subject to change*

Wednesday, October 22, 2025

7:00 am – 8:00 am	**Registration, Continental Breakfast, & Exhibit Viewing**
8:00 am – 8:15 am	**Welcome: Opening Remarks and Safety Moment** 2025 Conference Co-Chairs: Dave Cushman, West Virginia Paint, LLC Earl Crochet, Crochet Midstream Consulting
8:15 am – 9:00 am	**Session K1: "The Power of Relationships"** *You see it everywhere. People are always on their phones, even while eating. Nobody talks to each other anymore. People are texting to their co-worker at the adjacent desk. Our ability to communicate is deteriorating. In many ways, the Covid years have caused us to regress with meaningful conversations. Successful businesses rely on personal communication, trust, and relationships. We need to restore the power in relationships to succeed. The people we trust the most are our friends and that has never been more important in both our personal and business worlds.* **Speaker: Joe Sauger, COO, Buckeye Partners**
9:00 am – 9:20 am	**Morning Refreshment Break & Exhibit Viewing**
9:20 am – 10:30 am **(Track 1)**	**SESSION 1A: An Alternate Method to Verify the Anchorage Requirements for Storage Tanks** **Moderator: Austin Pace, RAPT Engineering, Inc.** *An alternate method to verify the anchorage requirements of storage tanks. An FEA is utilized to verify the resistance to the seismic overturning moment and uplift provided by the head of the stored product. The verification is performed using a static non-linear model of the full storage tank, where a seismic moment and uplift force acting on the tank shell are balanced by the dead weight of the tank shell and the annular ring portion of the floor that lifts the column of stored product.* **Speaker: David Nadel, Chevron** **SESSION 1B: Soil-Side Corrosion Monitoring and Inspection Predictions of Aboveground Storage Tank Bottoms** **Moderator: Rebecca Broussard, US EPA** *Monitoring of the undertank corrosion conditions could provide the following three critical assessments to the tank operators: (i) whether the active corrosion control methods are adequate or not, (ii) corrosivity trending of the tank pad material over time, and (iii) need for implementation of the additional corrosion control measures such as vapor corrosion inhibitors (VCIs) to mitigate corrosion. Field testing and analysis was conducted to determine suitability of the monitoring tools for soil-side corrosion monitoring of the ASTs.* **Speaker: Pavan Shukla, BSRA**
9:20 am – 10:30 am **(Track 2)**	**SESSION 1A: CUI^2 - Concise UAV Integration for Corrosion Under Insulation** **Moderator: Dave Cushman, West Virginia Paint, LLC.**

Discover a novel inspection workflow for Corrosion Under Insulation (CUI): drones equipped with visual and IR cameras rapidly screen insulated tanks for CUI risk, then quantify at the unexplainable locations with drone-mounted Pulsed Eddy Current (PEC) sensors for precise, non-intrusive wall thickness measurements. This integrated approach delivers safer, faster, and more cost-effective CUI detection and asset integrity management.

Speaker: Courtland Penk, Osprey Integrity USA

SESSION 1B: Using Reliability Gap Assessments for Successful API 2350 Compliance

Moderator: Kathy Hawks, Colonial Pipeline

Overfilling an Aboveground Storage Tank (AST) can have major consequences. Fortunately, the current 5th edition of API 2350, provides specific and in-depth guidance for overfill prevention. Several refineries, storage tank facilities, and terminals are taking heed to the updated API 2350 guidance and are considering a comprehensive, multi-disciplinary approach to proactive compliance. Find out how to successfully identify gaps enabling opportunities to implement immediate improvements.

Co-Speaker: Lakeshia Taylor, Becht
Co-Speaker: Steve Roberts, Delek

10:30 am – 10:50 am **Morning Refreshment Break & Exhibit Viewing**

10:50 am – 12:00 pm **(Track 1)** **SESSION 2A: Cascading Failures**

Moderator: Jerry Kolek, Consolidated Fabricators

The owners and operators of facilities with aboveground storage tanks and the people responsible for the design and construction of facilities with aboveground storage tanks.

Speaker: Adam Henson, US Chemical Safety Board

SESSION 2B: Modernizing Leak Detection and Repair (LDAR) with Optical Gas Imaging

Moderator: Joe Mentzer, Steel Tank Institute

Leak detection in the oil and gas industry is changing dramatically and becoming more challenging to do effectively and efficiently. Optical gas imaging is a critical component to meeting the leak detection demands and new technology will help operators comply with regulations, reduce emissions and keep faculties safer. The advanced OGI solutions for autonomous will play a critical role in modernizing leak detection and FLIR's new ADGiLE solution will make this requirement more streamlined.

Speaker: Kyle McKinney, FLIR

10:50 am – 12:00 pm **(Track 2)** **SESSION 2A: Seismic Evaluation of Storage Tanks under New State Regulations**

Moderator: TBD

Legacy storage tanks may not meet modern seismic standards due to outdated designs and material degradation. This session presents a methodology for assessing their fitness-for-service under seismic loads using advanced FEA modeling, fluid-structure interaction, and nozzle/piping analysis. A real-world case study illustrates how risk-informed mitigation strategies can be developed from these results, aligning with new regulatory requirements. Ideal for engineers, regulators, and facility managers facing aging infrastructure.

Speaker: Brian Lewiis, Roundtable Engineering Solutions, Chad Tuttle, Marathon

SESSION 2B: Engineering Analysis of Double Deck Roof Crude Storage Tank Failure under Rainwater Load; Case study

Moderator: Rafael Rengifo, Becht

In 2008–2009, 18 double-deck floating roof tanks were added to the KOC tank farm increasing the total number of storage tanks to 86. Over the following decade, two AST from these new tanks experienced roof collapse, primarily due to rainwater accumulation over the roof during an unusually heavy rainy season. A detailed investigation identified inadequate roof drain system design and low pontoon manway elevation as primary contributors. The limited number and improperly positioned

emergency roof drains allowed excess water to accumulate on the roof and enter the pontoons/compartments. This increased the roof load and subsequent ingress of crude oil into the pontoons further increased the risk of collapse. The case study outlines the root causes of the failure, as well as the limitations of inspection management tools like RBI, regular AST inspection to identify such issues. It presents key lessons learned, corrective actions taken and recommendations implemented to prevent similar failures in balance tanks. These insights also serve as guide to improved design validation and engineering review practices aimed at enhancing the reliability and safety of floating roof tanks.

Speaker: Shreenivas Kshatriya, Kuwait Oil Company

12:00 pm – 12:40 pm **Lunch**

12:40 pm – 1:10 pm **Exhibit Viewing**

1:10 pm – 1:55 pm **(Track 1)**

SESSION 3A: Spiral Welding of Vertical Storage Tanks

Moderator: Mark Kachelmyer, Phillips 66

Spiral welding tanks, a novel construction method for making vertical storage tanks. Using 11-ton coils, fully welded tanks can be spiral weld in workshop or in the field. Spiral welded tanks have single continuous circumferential weld and no vertical lor longitudinal welds. This is not theory; Spiral welded machines are in service now making tanks form 6' to 60' diameter.

Speaker: Cliff Ellery, Tira Stainless Inc.

SESSION 3B: Project Pitfalls by Owner/Operators

Moderator: Amy Baxter, Enbridge Pipeline

Contractors run into many owner/operator pitfalls when bidding and executing tank projects in the oil and gas industry. Many customers ask the question "why do we run over budget and schedule on major projects."

Speaker: Jerry Kolek, CONSOLIDATED FABRICATION AND CONSTRUCTORS, INC

1:10 pm – 1:55 pm **(Track 2)**

SESSION 3A: Tank Bottom-Side Corrosion Calculations: A 25-Year Study of the Validity of API's Tank Corrosion Rate Calculations

Moderator: Chris Commander, North Side Energy Services

Current API 653 guidance regarding tank floor corrosion rate calculations may be significantly under-predicting the corrosion rates in ensuing service intervals. This may may be increasing the risk of tank leaks due to bottom-side pitting. The author will present empirical evidence that supports these findings.

Speaker: William Mott, Taku Engineering

SESSION 3B: Optimizing In-Service Tank Inspection Using Advanced Ultrasonic Techniques for Challenging Geometries

Moderator: Nelson Acosta, HMT LLC

Discover how advanced ultrasonic inspection techniques are revolutionizing in-service tank evaluations—especially in hard-to-access areas like chimes and welds. This session highlights practical, non-intrusive methods for detecting corrosion and cracking without shutting down operations, using real-world case studies to show improved data quality and extended asset life.

Speaker: Anthony Chinn, Pond and Company

1:55 pm – 2:15 pm **Afternoon Refreshment Break & Exhibit Viewing**

2:15: pm – 3:25 pm **(Track 1)**

Session 4A: From Inspection to Assessment – Maximizing Your Tank's Operation

Moderator: Andy Wong, PEMY Consulting

The purpose of this presentation will provide an insight for tank owners and operators into extending the life of their tank operation through the use of new inspection techniques and fitness-for-service assessments.

Speaker: Siji Abraham, Quest Integrity; Terry Wach, Qi2 Elements

SESSION 4B: Update From the API 579 AST Task Group on Fitness-for-Service of Tanks

Moderator: Lyle Smith, Dow Chemical

Tank repair or alteration plans may need to be customized to unique situations through use of engineering evaluation. This presentation will discuss tank repairs and alterations that require engineering evaluation and provide an overview of the advanced analysis methods that can be leveraged to perform those evaluations. Case studies of advanced analysis of storage tank repairs will be provided to highlight the benefits that engineering evaluation can provide to major repairs.

Speakers: Devon Brendecke and Derek Slovenec, The Equity Engineering Group, Inc.

2:15: pm – 3:25 pm **(Track 2)**

Session 4A: UT Phase Array (New Technique) inspection Shell to Annular Plate

Moderator: Mike Brockway, Independent Consultant

Using a new application of Phase Array ultrasonic to ensure cover inspection under the shell plate of the tanks especially the high thickness plates, and in the crude oil storage tank

Speaker: Mohamed Elganzory, All Asset Integrity Systems

SESSION 4B: Ensure Your Tanks Are API MPMS-Compliant from Design to Maintenance

Moderator: Earl Crochet, Crochet Midstream Consulting

The accuracy and reliability of automatic tank gauging (ATG) systems are influenced not only by the selection of equipment but also, critically, by proper installation practices. This paper provides guidance on achieving compliance with the API standards outlined in the Manual of Petroleum Measurement Standards (MPMS).

Speaker: Johan Sanberg, Emerson

3:25 pm – 3:45 pm **Afternoon Refreshment Break**

3:45 pm – 5:00 pm **(Track 1)**

SESSION 5A: High Confidence API 653 and API 575 Data and Reporting Through Internal Robotic Inspections

Moderator: Rafael Rengifo, Becht

Acquiring high confidence data to support API 653 and API 575 inspection requirements has been attempted for many years and faced significant challenges that could not be fully addressed by inspection robots using external navigation and energy sources, and magnetic flux leakage/spot UT inspection methodologies. Today, given the appropriate internal tank conditions and planning, submersible inspection robots work autonomously using phased array ultrasonic testing (PAUT) and video payloads to offer the high confidence tank bottom inspection coverage and data quality required for API 653 and API 575 inspections and Regulatory Compliance.

Speaker: Brian Kinsey, Square Robot

SESSION 5B: The Importance of Tank Coating Assessments and Coating Specifications

Moderator: Nicholas Montebello, American Petroleum Institute

Is paint just something for aesthetic purposes or something more? It is actually the first line of defense against corrosion and preservation of your bulk liquids. Paint and its life expectancy is actually much more complicated than one might think.

Speaker: Adam Beers, KTA Tator

Moderator: Ivan Pinto, API Staff

SESSION 5C: Are you current on API Standards?

Hear a brief update on what tank-related API standards are recently published, nearing publication or currently under subcommittee revision. Additionally, as time and technology permit get an update on the API Individual Certification Program (ICP) Statics.

Speaker: Nick Montebello, API Staff

3:45 pm – 5:00 pm **(Track 2)**

SESSION 5A: Robotic Tank Cleaning - A step Change in Safety

Moderator: Dave Cushman, West Virginia Paint, LLC.

Our presentation will focus on reducing on site risks associated with tank cleaning through the use of robotic tank cleaning equipment. Presentation will include details on How robotic tank cleaning works, the technical developments of robotic tank cleaning technology, the key benefits and will include a summary of recent projects completed.

Speaker: Chris Platt, ReGen Robotics

SESSION 5B: Vapor Recovery During Tank Cleaning & Processing— Cost, Compliance, and Safety Impacts

Moderator: Dave Cushman, West Virginia Paint, LLC.

Uncontrolled tank emissions during cleaning operations represent a critical challenge for the oil & gas and petrochemical industries. With the rise of ESG mandates, tightening EPA and state regulatory frameworks (e.g., 40 CFR 60/63, Title V, MACT standards), and increasing client scrutiny, the need for effective vapor recovery solutions is more urgent than ever. This abstract explores current technologies and methodologies used to mitigate emissions during API-ASGT tank cleaning & material processing—such as carbon adsorption, thermal oxidation, and scrubber systems—and analyzes their performance in real-world operations.

Speaker: Willie Lule, USA DeBusk

5:00 pm – 5:05 pm **Wrap Up of Day One**
2024 Conference Co-Chairs:
Dave Cushman, WV Paint
Earl Crochet, Crochet Midstream Consulting

5:05pm – 6:00 pm **Welcome Reception, Exhibit Viewing, & Networking – Presented by our Platinum Sponsors**

Thursday, October 23, 2024

8:00 am – 8:15 am **Opening Remarks and Safety Moment**

8:15 am – 9:00 am **Session K2: True Vapor Pressure Limits of Floating Roofs**

Increasingly, owners of petrochemical facilities are specifying the use of floating roofs on products with true vapor pressures higher than what is either legally allowed in some jurisdictions or that can be safely handled by floating roofs designed and constructed to API 650. The record of the industry trying to store high vapor product pressure in floating roof tanks is filled with damaged and sunken floating roofs from the attempt. The petrochemical industry needs to relearn this lesson before the errors of the past are repeated.

	Speaker: Greg Soules, CB&I Storage Solutions
	Moderator: Matt VanAlsburg, Advance Tank & Construction
9:00 am – 9:20 am	**Morning Refreshment Break & Exhibit Viewing**
9:20 am – 10:30 am	**SESSION 1A: Elevated Insight: How Drones are Transforming Storage Tank Inspections**
	Moderator: Marilyn Shores, Shores Consulting LLC
	This session will provide participants with insight and examples of how drones are being used for inspection and analysis for storage tanks. A drone inspection allows you to pinpoint, identify, record, evaluate, and report areas of concern and repair. Using both LiDAR and photogrammetry, drones can create 3D models of areas previously inaccessible to humans. Ultrasonic Thickness (UT) drones have given the ability to obtain steel thickness data in previously inaccessible areas.
	Speaker: Greg Mann, Ranger Inspection
	SESSION 1B: Corrosion of Aluminum Floating Roofs During Hydrostatic Testing
	Moderator: Peter Williams, Concord Tank
	This presentation seeks to address the problems of floating roof damage faced by the storage tank industry. Failure analysis case studies are referenced, and lab experiments which were designed to replicate these conditions have been performed. Some of these failures may have resulted from poor water quality during hydrostatic standup tests. Results from the lab work and the field observations have been reconciled and compiled in this presentation. The end goal is to add to the knowledge base within the storage tank community and beyond.
	Speaker: Sudhakar Mahajanam, Mistras Group, Inc.
10:30 am – 10:50 am	**Morning Refreshment Break & Exhibit Viewing**
10:50 am – 12:00 pm	**SESSION 2A: How Long Should It Last? An Operations Experience with Full Contact Floating Roofs**
	Moderator: Dave Nadel, Chevron
	Join us for a comprehensive review of decades of operational experiences with full-contact floating roofs in crude oil tanks. Discover insights on integrity inspections, maintenance, and failure patterns. Learn about the challenges of in-service repairs, the importance of collaboration with manufacturers, and strategies to enhance reliability and lifespan. This session offers crucial guidance for optimizing tank and roof integrity programs.
	Speaker: Sandeep Sra, Trans Mountain
	SESSION 2B: Code Compliant EFR Repairs
	Moderator: Larry Foster, Marathon Petroleum
	API-653 has limited guidance on inspection and repairs for EFRs. This presentation will discuss some of the common wear, tear, and corrosion issues, how to inspect them, and how to make repairs to extend service life, reduce unplanned downtime, and minimize EFR failures. It will also cover options for in-service repairs to EFRs.
	Speaker: Daniel Fleck, Becht; Ronnell Perry, Beacon
12:00 pm – 12:40 pm	**Lunch**
12:40 pm – 1:10 pm	**Exhibit Viewing**
1:10 pm – 1:55 pm	**SESSION 3A: Clean Water Act Hazardous Substance Facility Response Plans Overview**

Moderator: Mark Jordan, CB&I

EPA's new Clean Water Act Hazardous Substance Facility Response Plan regulations apply to facilities that could reasonably be expected to cause substantial harm to the environment, based on their location. This session will cover the recent rulemaking and implementation progress.

Speaker: Rebecca Broussard, US EPA

1:55 pm – 2:15 pm **Afternoon Refreshment Break & Exhibit Viewing**

2:15 pm – 3:25 pm **SESSION 4A: Evaluation of Advanced Submerged Robotic Inspection Technologies for In-Service Internal Inspections**

Moderator: Earl Crochet, Crochet Midstream Consulting

This session presents Enbridge's evaluation of Submerged Robotic Inspection Technologies (SRIT) for in-service internal inspections of API 650 storage tanks to assess current capabilities and limitations of the technology. SRIT offers the potential to reduce personnel exposure, minimize outage durations, and extend inspection intervals while maintaining compliance. The presentation explores controlled test tank trials, performance comparisons with conventional NDE methods, and lessons learned on data reliability and operational challenges.

Speaker: Liam Hartzell and Yugant Manchanda, Enbridge Liquid Pipelines

SESSION 4B: New Settlement Analysis Options in API 653

Moderator: Earl Crochet, Crochet Midstream Consulting

New settlement method recently approved in API 653 for handling laser scan data for differential settlement analysis. Inspectors, listen up! This is an analysis that will become more common as more and more tanks apply laser scanning to tanks either inside or outside. We will show resources for getting this added to your API 653 program calculations.

Speaker: Phillip Myers, PEMY Consulting, LLC.

3:25 pm – 3:45 pm **Afternoon Refreshment Break & Final Exhibit Viewing**

3:45 pm – 4:55 pm **SESSION 5A: Storm Surge Induced Failures of Storage Tanks**

Moderator: Daniel Fleck, Becht

This session will explore common failure modes of above-ground storage tanks during storm surge events, focusing on flotation failures. The presentation will include results from analytical and finite element modeling to identify key failure points and propose innovative mitigation strategy which allows tanks to float to prevent failures in the bottom plate.

Speaker: Saberethinam Kameshwar, PhD

Closing Keynote: Signals vs. Noise: Energy Markets and the Economy

A presentation on the state of the economy from API's Chief Economist.

Speaker: Mason Hamilton, American Petroleum Institute

4:55 pm – 5:00 pm **Closing Remarks**
2024 Conference Co-Chairs:
Dave Cushman, West Virginia Paint LLC
Earl Crochet, Crochet Midstream Consulting

5:00 pm – 6:00 pm **Closing Reception and Networking - Presented by our Platinum Sponsors**