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# Preliminary Program

## The 2017 API Tanks, Valves, and Piping Conference & Expo

October 25-26, 2017 | Sheraton Seattle | Seattle, WA | [www.api.org/tvp](http://www.api.org/tvp)

As of 10/3/2017 | agenda subject to change

Track Color Code:

Track A — Tanks

Track B — Valves & Piping

### Wednesday, October 25, 2017

7:30 AM – 8:30 AM	<b>Continental Breakfast in the Exhibit Hall– Sponsored by TBD</b>	
8:30 AM – 8:50 AM	<b>Welcome: Opening Remarks and Safety Moment</b> 2017 Conference Co-Chairs: Dave Cushman, WV Paint - Tanks Morris Kline, Caldwell Tanks - Tanks Gobind Khiani, Fluor – Valves & Piping Don Mears, Analytical Training Consultants – Valves & Piping	
8:50 AM – 9:30 AM	<b>Keynote 1: Charles Schmitt, President, SSAB Americas</b>  <b>Moderator:</b> Wayne Geyer, STI/SPFA  <i>In April, 2017, President Trump authorized an investigation to be performed by the Secretary of Commerce under Section 232 of the Trade Expansion Act to determine the impact on national security resulting from massive imports of foreign steel. President Trump signed a memorandum directing the Secretary to recommend actions to adjust steel imports if foreign imported steel threatened our national security.</i>  <i>Six months have passed. This session will be centered around the latest developments and business outlook with the North American steel industry, establishing if and how global overcapacity has resulted from illegal trade practices, and the US response to such practices. Extensive commentary gathered from the Section 232 investigation includes the impact on steel processing, and the impact on downstream steel products fabricated for the energy infrastructure.</i>	
9:30 AM – 9:50 AM	<b>Morning Refreshment Break 1</b>	
9:50 AM – 10:30 AM	<u><b>Track A – Tanks</b></u>  <p style="text-align: center;"><b>SESSION A1</b></p> <b>Moderators:</b> A1A: Rich Ireland, Rosemount Tank Gauging; A1B: Amy Baxter, Enbridge Energy Company  <u><b>A1 A EPA Regulatory Update</b></u>	<u><b>Track B – Valves &amp; Piping</b></u>  <p style="text-align: center;"><b>SESSION B1</b></p> <b>Moderator:</b> Don Mears, Analytical Training Consultants  <u><b>B1 A U.S. Chemical Safety Board Investigation Update: Hazards of Hot Work Operations During Pipeline Welding.</b></u>

*Provides a regulatory and policy update on the OEM programs that impact AST tank owners. Covered are the regulatory actions related to Waters of the United States (WOTUS) and the Chemical SPCC Rule and includes findings from the field, typical inspection violations and an overview of the EPA inspection process. The presentation will include an open Q&A regarding EPA's regulatory oversight of AST facilities under its Clean Water Act authorities.*

**Speaker:** Mark Howard, US EPA

### **A1 B New Venting Requirements vs. Existing Tanks**

*A common sense approach to documenting existing tank vents, rather than applying the more rigorous standards of the PHMSA adopted version.*

**Speaker:** Marilyn Shores, Shores Consulting

*This presentation will share findings of the Chemical Safety Board (CSB) investigation of the August 2016 crude oil terminal flash fire at Sunoco Logistics Partners in Nederland, Texas, that injured seven contractors performing hot work activities on a pipeline connection. Summaries and lessons learned from previous investigations will be discussed, highlighting how CSB recommendations and American Petroleum Institute (API) published guidance, recommended practices and standards can be used to prevent hot work-related injuries and fatalities.*

**Speaker:** Manuel Ehrlich Jr, U.S. Chemical Safety and Hazard Investigation Board

### **B1 B Resources for Fixed Equipment Mechanical Integrity - Why Do We Need So Many? Past vs. Present**

*This presentation will indicate why operating sites need more resources (human and monetary) to provide fixed equipment mechanical integrity (FEMI) today versus 30+ years ago. I will cover most of the major FEMI changes in the oil, chemical and gas industry in the last 30+ years that strain our FEMI budgets and staffing levels. We now have to focus beyond just the prevention of major process safety events from tanks, valves and piping to minimize all leaks, including those that were once thought to be minor and acceptable. I will address why this is necessary and how the industry is responding.*

**Speaker:** John Reynolds, Intertek AIM

10:30 AM – 10:50 AM

## **Morning Refreshment Break 2**

10:50 AM – 12:00 PM

### **SESSION A2**

**Moderators:** A2A: Iain Gomme, TENG Inc.; A2B: Ron Santelik, Howard Energy Partners

### **A2 A Impact of Inlet and Outlet Piping on Low Pressure Vent Capacity**

*Presents a method to evaluate the impact of AST vapor recovery system inlet and outlet piping configurations on low-pressure tank vent capacity and explores case studies of actual installations.*

**Speaker:** Achilles Arnaez, Smith & Burgess

### **A2 B What to Expect (Maybe) from the Updated API 2350**

*This session will provide an update on the revision efforts of API Standard 2350, Overfill Protection for Storage Tanks in Petroleum Facilities. API 2350 is a crucial document, cited in regulations. It recognizes that*

### **SESSION B2**

**Moderator:** David Bayreuther, Metso

### **B2 A Designing and Maintaining Reliable Emergency Shut Down Safety Instrumented Systems**

*Per API 2350 Category 3 Tanks require Overfill Protection Systems that differ significantly from category 1 & 2 which includes implementation of Safety Instrumented Systems (SIS) in addition to Automated Overfill Protection Systems or (AOPS). In this presentation we take a deeper look at Risk Reduction Analysis and the Safety Instrumented Systems required to ensure that tanks are adequately protected against the severity and consequence of overfilling and strategies to increase the reliability and maintain the health of these systems.*

**Speaker:** Shawn Statham, Emerson

### **B2 B Multiport Flow Selector Valve Applications, Construction,**

prevention provides the most basic level of protection, as opposed to "prevention." Standard 2350 was first issued in 1987. The 2nd edition was expanded to include emergency spill prevention. The 3rd edition had an expanded scope to include Class I and Class II hydrocarbon liquids, as well as tankage in broader usage. The 4th edition continued to build on experience and new technology through the use of management systems and risk reduction. What will the yet unpublished 5th edition stipulate? When will it be published? This session will answer these questions and provide an update on what changes you can expect to see in the 5th edition of API 2350.

**Speaker:** Earl Crochet, Kinder Morgan

## and Troubleshooting

A multiport flow selector valve provides a cost effective and compact means to combine fluids from up to seven wellheads, while simultaneously isolating any single well for testing. The flow selector is ideal for a variety of oil, gas, and process applications that include water/steam injection for Enhanced Oil Recovery. This presentation covers the MPFS design, sizing, and typical failure modes.

**Speaker:** Wade Helfer, Emerson

12:00 PM – 1:10 PM

## Attendee Lunch – Sponsored by CB&I

1:10 PM – 1:55 PM

### SESSION A3

**Moderator:** Dana Schmidt, STI-SPFA

#### **A3 A The Key Relationships Between Industry, Fire Codes, and SPCC Plans**

*Covers the application of industry and fire codes to SPCC compliance. Industry and fire codes provide the engineering support needed to certify that a plan is in conformance with good engineering practice. Industry and fire codes also provide a strong basis for applying standards for construction, overflow prevention, corrosion protection, secondary containment, testing, inspections, and spill prevention. SPCC regulations put the responsibility for compliance on the professional engineer when writing and certifying plans, and one of the key aspects of compliance relies on good engineering practice.*

**Speaker:** Joyce Rizzo, JD2 Environmental

### SESSION B3

**Moderator:** Greg Johnson, United Valve

#### **B3 A 30 years in 30 Minutes - The history of Valve Fugitive Emissions Standards through our Eyes**

*This presentation will provide some of the history on the development of fugitive emissions standards including the ANSI/ISA-93.00.1-1999, Petroleum Environmental Research Forum (PERF-1990) study on the causes of valve packing leakage, ISO-15848-1 and -2 standards on valve leakage and repair, API-622 packing test for fugitive emissions, API-624 rising stem (gate) valve emissions test, API-641 quarter turn valve emissions test. We will provide an overview of these standards and a way forward for new standards and modifications to the current standards.*

**Co-Speakers:** Rich Davis, Flexitallic; Michael O'Quinn, International Standard Valve

1:55 PM – 2:10 PM

## Afternoon Refreshment Break 1

2:10 PM – 3:20 PM

### SESSION A4

**Moderator:** George Morovich, Tank and Environmental Technologies, Inc. (TETI)

#### **A4 A Hurricanes and Storm Events - Lessons Learned**

*Following a brief presentation on storm related effects that impact storage tanks, this will be a panel discussion to convey what has been learned from experience and what can be done to define vulnerabilities, improve storm preparedness and mitigate impact. The focus will be on hurricane and other storm related events.*

### SESSION B4

**Moderator:** Ram Viswanathan, L&T Valves Limited

#### **B4 A Laboratory Measurement of the Oxidation Rate of Flexible Graphite Sealing Materials**

*This paper presents a proposal for a standard test for measuring oxidation rate of graphite. Graphite is commonly used in gaskets and packings and it known to oxidize and degrade, causing fugitive emissions. The paper will show how this test discriminates between grades of graphite, showing how some are more stable to oxidation than others.*

**Panel Speakers:** Mike Burgett, IMTT; John Pachuta, Energy Transfer Partners; Dr. Jamie Padgett, Rice University George R. Brown School of Civil and Environmental Engineering; Lance Watson, A.R. Watson Inc.

**Speaker:** Stephen Bond, Flexitallic

**B4 B Realizing the Unintended Consequences of Improving Prevention and Mitigation Efforts Related to Accidental Releases of LNG**

*Some methods used to stop the overflow of low pressure storage tanks can have dire consequences. With good intentions, facilities may install shut down valves that will stop the flow from the source when a tank is detected to be at a high level. Depending on the source, closure of the valve can cause water hammering, and the resulting pressure spikes can overpressure the pipeline and lead to loss of containment. Often, the midstream owner of the pipeline is not aware the end user has installed a shut-down valve and created this risk. This presentation reviews this risk with the purpose to increase awareness.*

**Speaker:** Jose Ortega, Smith & Burgess

3:20 PM – 3:35 PM

**Afternoon Refreshment Break 2**

3:35 PM – 5:00 PM

**SESSION A5**

**Moderators:** A5A: Mike Brockway, TCI Services, Incorporated; A5B: Nelson Acosta, HMT Inspection

**A5 A Floating Roof Challenge Flag: Why You Should Red Flag Your Floating Roof Repairs**

*A more rigorous approach to floating roof inspection and repair will yield long term cost, operational, and safety benefits. To support this claim we will look a real world case studies and potential short and long term solutions to the inadequacies in our current inspection and repair practices.*

**Speaker:** Peter Williams, Concord Tank Corp.

**A5 B New Technology: In-Service API 653 Robotic Tank Floor Inspections**

*Robotic tank floor inspections save customers' time and money, while meeting and exceeding API 653, EPA, and SPCC requirements. Robotic inspections provide refineries and tank farm owners with a safe and efficient nondestructive testing (NDT) inspection of large hydrocarbon storage tanks. This ground-breaking technology uses ultrasonic sensors to inspect the floor including the critical zone, which provides an accurate tank floor plate condition assessment, with limited to no downtime.*

**SESSION B5**

**Moderator:** Stephen Crimauo, API Standards, Manager

**B5 A “Keeping Fit for the Fight” – Tips for Proper Valve Preparation, Storage & Installation**

*Valves are not like a stick of extra-heavy walled pipe or a 90o fitting you can pile in a laydown yard and then install 18 months later. Valves need a healthy dose of TLC during blasting and coating, before and during storage and special attention during installation in order for them to function properly. This presentation will focus on: 1) procedures for proper preparation and protection of valves during blasting & coating operations; 2) protection of valves while in storage; 3) Proper installation procedures.*

**Speaker:** Greg Johnson, United Valve

**B5 B Valves Commissioning Best Practices**

*The presentation will discuss several Saudi Aramco best practices and measures in valves handling, preservation and pre-commissioning activities. This includes touch basing on cases faced during several pipeline projects along with sharing lessons learned that were successfully implemented. The presentation will also discuss how such practices have impacted project execution and prevent unwanted costly delays.*

**Speaker:** Mohammed Tarabzouni, Saudi Aramco

**Speaker:** Zachary Chapman, Manta Robotics LLC; Ron Marsden, Manta Robotics LLC

5:00 PM – 6:30 PM

**Welcome Reception and Networking in the Exhibit Hall– Sponsored by Bechtel**

## Thursday, October 26, 2017

7:30 AM – 8:30 AM

**Continental Breakfast in the Exhibit Hall – Sponsored by TBD**

8:30 AM – 8:45 AM

**Welcome:**  
Conference Co-Chairs:  
2017 Conference Co-Chairs:  
Dave Cushman, WV Paint - Tanks  
Morris Kline, Caldwell Tanks - Tanks  
Gobind Khiani, Fluor – Valves & Piping

### Track B – Valve & Piping

**Welcome: Valve & Piping Track Opening Remarks and Safety Moment**  
Valve and Piping Conference Co-Chairs:  
Gobind Khiani, Fluor; Don Mears, Analytical Training Consultants

8:45 AM – 9:30 AM

**Keynote: Human Critters, Rebels, Revolution and Success!**

**Speaker:** Mike Burgett, IMTT

*Dr. Mike Burgett combines his academic background and his thirty years of practical management experience in a presentation that will provide keen insight for those whose job is to manage human critters.*

**Moderator:** Morris Kline, Caldwell Tanks

9:30 AM – 9:50 AM

**Morning Refreshment Break 1**

9:50 AM – 10:30 AM

### Track A – Tanks

#### SESSION A6

**Moderator:** John Pachuta, Energy Transfer Partners

#### A6 A Overlooked Performance Implications for Refrigerated LNG Tanks

*Flat bottom tanks that are used to store refrigerated liquefied gases have design concepts that differ widely. These include single containment, double containment, full containment and membrane tank systems. These variations create complex and widely varying behavior in response to postulated emergency conditions. Events that come from the inside-out are more familiar. Much less attention has been given to 'what-if's,' should a breakdown start on the outside. This presentation will address the consequences of both, using simple, factual logic.*

**Speaker:** Doug Miller, CB&I

### Track B – Valves & Piping

#### SESSION B6

**Moderator:** Ram Viswanathan, L&T Valves Limited

#### B6 A The Latest Developments in PMI tools and Applications

*The latest capabilities and new applications for portable XRF technology for PMI analysis. Including analyzing for micro alloying elements, monitoring RE (Residual elements), calculating a Carbon Equivalency factor(CE) and demonstrating the ability to monitor low Si levels in Carbon steel piping systems to predict Sulfidation corrosion.*

**Speaker:** Mark Lessard, Thermo Niton Analyzers LLC

10:30 AM – 10:50 AM

**Morning Refreshment Break 2**

10:50 AM – 12:00PM

**SESSION A7**

**Moderators:** A7A: Curtis Garner, Phillips 66; A7B: Earl Crochet, Kinder Morgan

**A7 A How to Properly Complete the API 650 Data Sheet**

*The API 650 tank data sheet houses critical information for bidding, purchasing, designing and constructing tanks. The data sheet can be your best ally and primary tool to communicate your project's business and technical needs, but conversely a single errant data sheet entry or omission can be your greatest enemy, leading to major design flaws, cost overruns, and contractual misunderstandings. The panel will provide insight into properly completing the data sheet, potential land mines, and best practices. Completely understanding and mastering use of the data sheet takes years, and this discussion will help speed the process and show you better ways the data sheet can serve you and your company.*

**Panel:** Matt Van Alsburg, Advance Tank & Construction Co.; Andrew Yearwood, PEMY Consulting

**A7 B Drones for Storage Tank Inspections and Beyond**

*This presentation will educate the audience on the benefits of adding drones to the internal inspection process of storage tanks. Reduce downtime by eliminating scaffolding, along with increasing the safety of the inspector by using remote platforms to gain better access to elevated areas.*

**Speaker:** Chris Smith, Interactive Aerial

**SESSION B7**

**Moderator:** Stan Allen, Bray

**B7 A Cryogenic Service - Valve Design & Testing requirements**

*This paper encompasses critical aspects in designing and testing Cryogenic valves such as Finite Element Analysis to evaluate thermal stresses and calculate bonnet extension, inherent safety features required and testing to performance standards such as ISO 28921. This paper would also compare the design and testing parameters listed in MSS SP-134, ISO 28921 and EN 12567.*

**Speaker:** Ram Viswanathan, L&T Valves Limited

**B7 B API Valve Testing Standards & Hydrostatic Valve Testing Technologies**

*API Valve Testing Standards and how they relate to Hydrostatic Valve Testing Technologies. There are many Valve Testing Standards from API 6D through API 608 as well as ANSI Standards. The requirements & standards will be discussed. A discussion of Current Valve Testing Technologies will be discuss & reviewed.*

**Speaker:** Kurt Stridinger, Calder Testers

12:00 PM – 1:10 PM

**Attendee Lunch in the Exhibit Hall – Sponsored by TBD**

1:10 PM – 1:55 PM

**SESSION A8**

**Moderator:** John Lieb, Tank Industry Consultants

**A8 A Hot Work Safety - Building Best Practices for Tanks and Piping**

*Recent incidents involving hot work activities within the petroleum industry highlight a potential need for the valuable information already developed by the industry to guide and safeguard such processes. It appears a reminder is in order so that these practical resources developed over the years as a result of previous hard lessons learned*

**SESSION B8**

**Moderator:** Michael O'Quinn, International Standard Valve (ISV)

**B8 A Valve and Pipe Integrity Monitoring and Leak Detection with Advanced Polymer Absorption Hydrocarbon Sensors**

*Improving safety is an ongoing effort in the Oil & Gas industry and there is a strong interest in practical and economical technologies for facility integrity monitoring and early leak detection. This presentation introduces a broad industry effort to develop the next generation Polymer Absorption (PA) hydrocarbon detectors for maintenance free applications*

are not forgotten and are applied each time hot work is contemplated. OSHA, API, AWS, and NFPA have all captured the best practices for hot work hazard recognition and control, which this presentation will review and assemble into a hot work safe practices outline for work on tanks, piping and related systems.

**Speaker:** Guy Colonna, NFPA

in a wide range of facility settings.

**Speaker:** Nick Tzonev, Syscor Controls & Automation Inc.

### **B8 B Check Valves in Cryogenic Service**

*Natural gas is becoming a good and reliable energy source due to economic and environmental reasons. Its use will continue to increase worldwide for many years to come. Thus, the market use of cryogenic valves will increase in the future. The importance and use of check valves is indisputable in many industries where reverse flow prevention is paramount such as cryogenics and certainly most important LNG service. Cryogenic check valves are a very critical component of the LNG supply chain. They are self-actuated valves without the need for external assistance to open and close and have the sole purpose of directing fluids or gases in a single direction and preventing their reversal. Main function is to protect rotating equipment.*

**Speaker:** Carlos Davila, Crane ChemPharma

1:55 PM – 2:10 PM

## **Afternoon Refreshment Break 1**

2:10 PM – 3:20 PM

### **SESSION A9**

**Moderator:** A9A: Mark Howard, US EPA; A9B: Andy Yearwood, PEMY Consulting

#### **A9 A Evaluating Existing Linings for Continued Service - An Owner's Dilemma**

*At the next out-of-service interval, owner/operators finally get an opportunity to see how effective their lining installation has been. This presentation will explore some of the issues that owner/operators face when making the decision to repair and maintain the existing coating or to completely remove and replace it. It will include a discussion of inspection tools as well as what the tools actually do and how they can aid or interfere with good decision making.*

**Speaker:** David Cushman, West Virginia Paint, LLC

#### **A9 B Firewater Storage: A Proven, Economical Solution may be NEW to You!**

*This presentation provides introductory information on the design and construction of pre-stressed concrete tanks for water storage applications at plant and terminal facilities. Pre-stressed concrete tanks have an 80 year proven history of providing reliable water storage. This tank solution may reduce construction duration, reduce initial construction cost, and eliminate tank coatings which require maintenance and rehabilitation over the tank life-cycle.*

### **SESSION B9**

**Moderator:** Carlos Davila, Crane ChemPharma

#### **B9 A Impact of Safety Integrity Level (SIL) rating of Valves in a Safety System**

*The paper addresses the design aspects of SIL capable actuated valves, emphasizes the factors that matter for SIL rating from Systematic capability to PFD and SFF, the factors that affect SIL rating and how to maintain the SIL rating of a valve in service.*

**Speaker:** Ram Viswanathan, L&T Valves Limited

#### **B9 B EPA Inspections of Washington Petroleum Distributors, 2010-2017**

*EPA inspects petroleum distributor facilities for compliance with SPCC Plan and Facility Response Plan requirements. If an inspection did not go well, a notice of violation letter is issued, citing deficiencies, and requiring an updated Plan. EPA inquiries about EPCRA chemical reporting and CAA Risk Management Plans ask for a rapid written response about a company's compliance with relevant requirements. Significant penalties are regularly assessed for non-compliance of these requirements.*

**Speaker:** Patrick Wicks, Environmental Engineering & Consulting

	<b>Speaker:</b> Will Cooksey, Preload, LLC	
3:20 PM – 3:35 PM	<b>Afternoon Refreshment Break 2</b>	
3:35 PM – 4:50 PM	<p style="text-align: center;"><b>SESSION A10</b></p> <p><b>Moderator:</b> A10A: Marilyn Shores, Shores Consulting; A10B: Peter Williams, Concord Tank Corp.</p> <p><b><u>A10 A</u> Avoid that Sinking Feeling: A Look at Floating Roofs and Why They Fail</b></p> <p><i>This presentation will explore some misconceptions and the science behind why floating roofs sink. Thanks to Standard API 650, the industry has largely protected itself from primary load cases. Now the battle is shifting to non-standard loads, load combinations, and other events. Tank owners should seek to be aware of all load cases and interactions with events that can impact a floating roof. The presentation will share some specific best practices and general strategy for safeguarding steel floating roofs.</i></p> <p><b>Speaker:</b> Andrew Yearwood, PEMY Consulting</p> <p><b><u>A10 B</u> API Standards 101</b></p> <p><i>Ever wonder how API standards are created but were afraid to ask? What does “consensus” mean within the API standards world? Who gets to vote? What happens if someone votes negative? The answers to these questions will be explored in order to get a better understanding of the API standards development process.</i></p> <p><b>Speaker:</b> Earl Crochet, Kinder Morgan</p>	<p style="text-align: center;"><b>SESSION B10</b></p> <p><b>Moderator:</b> Don Mears, Analytical Training Consultants</p> <p><b><u>B10 A</u> A New, Risk-Based Approach to Avoid Vibration-Induced Fatigue Failure in Process Piping</b></p> <p><i>Vibration-induced fatigue accounts for more than 20% of piping failures. These failures can be prevented through proper design, however, current industry practices frequently miss important aspects, and issues are often not managed until failures occur.</i></p> <p><i>This presentation presents a proactive, risk-based approach that helps designers, engineers and managers of piping systems reduce vibration risks before damage occurs. This is achieved through screening and risk-ranking of critical locations, based on specific process and design considerations.</i></p> <p><b>Speaker:</b> Michael Cyca, Wood Group</p> <p><b><u>B10 B</u> Valves of the Future</b></p> <p><i>Industrial valves serve critical roles in highly dangerous applications. Naturally, the emphasis on product selection, design, and production focuses on minimizing risk. New technologies tend to be slowly adopted. The industry is generally not associated with leading high technology. However, there are a series of recent developments in related industries that indicate the valve business is on the cusp of significant transformation. Not only what the valves can do, but also in the business cycle from manufacturing through delivery. Looking at the history, developing trends, and emerging technologies, this presentation projects the future capabilities of valves and the valve industry. The impending changes are closer than many realize.</i></p> <p><b>Speaker:</b> David Bayreuther, Metso</p>
4:50 PM – 5:00 PM	<p><b>Conference Wrap-Up and Lessons Learned</b>  Tank Conference Co-Chairs:  Dave Cushman, WV Paint; Morris Kline, Caldwell Tanks</p>	<p><b>Conference Wrap-Up and Lessons Learned</b>  Valve and Piping Conference Co-Chairs:  Gobind Khiani, Fluor; Don Mears, Analytical Training Consultants</p>
5:00 PM – 6:00 PM	<b>Closing Reception &amp; Networking – Sponsored by TBD</b>	