



22ND ANNUAL ABOVEGROUND STORAGE TANK CONFERENCE & TRADE SHOW
ROSEN SHINGLE CREEK HOTEL | ORLANDO, FLORIDA

NISTM CO-LOCATED EVENT:

AST FOCUSED SHORT COURSE*

January 18, 2021 | Orlando, Florida

TUESDAY, JANUARY 18, 2021

Tank Venting, Blanketing, and Protection for Petroleum Storage Tanks

9:00am

API Flow Certification Task Group Update

Philip Myers, PEMY Consulting, LLC

What API is doing to improve tank vent valves and details about the PV Valve flow certification task group work.

9:30am

All About Tank Venting and Venting Devices

Michael Davies, Protego

This topic will provide an overview of everything you need to know about protecting tanks from excess internal or external pressure caused by normal operations and daily atmospheric temperature cycles. A lot of frequently asked questions associated with tank breathing and the mechanism of operation such as accumulation and overpressure will be addressed. Moreover, because of substantial changes in API standards, we address whether updates are required and what the storage tank owners are doing about these changes. Knowledge on this topic is required to keep your tank integrity in check.

- API 2000 overview
- Excess pressure and vacuum
- Vent valve types (conventional, pilot, other) and anatomy
- Vent operational parameters
- Set pressure
- Accumulation
- Overpressure
- Blowdown
- Emissions from these devices and what you can do
- Tradeoffs with using huddle chamber
- What tank design parameters are important
- What owner needs to know and specify for success
- API update on flow certification testing

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Tank Venting, Blanketing, and Protection for Petroleum Storage Tanks (<i>continued</i>)	
10:20am	<p>Deflagration and Detonation Arrestors <i>Derek Kelley, Emerson</i></p> <p>How do you connect a potentially flammable tank to an ignition source such as a flare or even lightning strikes? Also, NFPA and other fire codes requires deflagration arrestors in many specific cases. Are you up to date on which requirements apply? Do PV vent devices function as well as deflagration arrestors; are they allowed in lieu of arrestors? What happens if you use a deflagration arrestor where a detonation arrestor should be used and vice versa. All fundamental topics associated with these critical safety devices will be addressed.</p> <ul style="list-style-type: none"> • How these devices can save your facility from destruction? • Difference between deflagration and detonation arrestors and applications • What are they and how do they work? • When are they required? • Are PV valves substitutes for flame arrestors? • How to specify? • What guarantees should owner/user require? • Applications
11:10am	<p>How to Gas Blanket Petroleum Tanks <i>Justin Hamilton, Cashco</i></p> <p>Gas blanketed tanks are important for safety reasons, product integrity, and other purposes. Blanket gas failures are at best costly and at worst an environmental and safety hazard. In addition, the operational parameters are tight, and operations and engineering must be precise and careful in specifying, designing, and inspecting these devices. Some topics included are:</p> <ul style="list-style-type: none"> • When to provide gas blanketing • Blanket gas differences, selection and advantages • Setpoint issues • Failure modes and effects • Impact of tank design parameters on gas blanketing • Practical issues
12:00pm-1:30pm	LUNCH BREAK

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Addressing Petroleum Storage Facility and Tank Risk

Both the chemical and petroleum industries have struggled for years with the problem of making the risk assessment and management processes available today – fit-for-purpose. Standardized approaches that rely on risk matrices or layers of protection analyses and even bow-tie diagrams have proliferated. But problems with implementation, efficiency in execution, accuracy, and other implementation issues abound. How does one use an enterprise wide methodology that solves all of these problems and more?

The fundamental purpose of risk assessment and management is to determine if it is tolerable. This leads to the flipside; if the risk is not considered tolerable, we want to know how we can effectively and efficiently reduce risk until we are in a safe zone. Can Risk Based Inspection (RBI) be directly applied to achieve this? If not how can/should risk theory be applied in a practical way to understand and control risk?

Once a decision is made to use risk tools, then there are many questions:

- Should we hire an off-the-shelf RBI supplier?
- Should we develop our own RBI program?
- Should we expand on the ideas of RBI to a risk management system?
- What will the RBI program do for us?
- If we develop our own program how do we do it?
- How do we measure the potential impact of the RBI program?
- Are the development and implementation costs worth it?
- Is there a way to make a business case for risk assessment and management?

This focused short course will take a general approach which includes RBI but goes beyond it so that a balanced risk picture (the big picture) is always visible to management. It will cover the essential ingredients of effective, practical, and logically sound methodologies and how they can be identified.

We discuss a systematic approach to risk assessment and management including

- Assess risks for likelihood and consequence
- Develop alternatives that might achieve the objectives
- Specification of objectives and value measures for measuring program effectiveness
- Determine how well each alternative achieves each objective using evaluation measures
- Consider tradeoffs among the objectives
- Select the alternative that on balance best achieves the objectives taking into account uncertainties
- How to deal with very high consequence and very low likelihood events

Framing a corporate wide risk reduction program is a project like any other. A poor up-front assessment leads to headaches and problems down the road with multiple patches and calibrations required to keep the program alive and breathing in spite of its unreliable results. Another problem is that the industry standardized guidance advocated by trade associations and publications is often thought to be a roadmap that can simply be copied and pasted into your organization - *it is not*. Each company has different risk tolerance, risk pathways, and corporate values. An effective risk management process requires addressing all of these things and more.

**1:30pm till
4:00pm**

4:00pm

ADJOURN



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FREE AST FOCUSED SHORT COURSE REGISTRATION FORM

JANUARY 18, 2021

9:00am – 5:00pm

FREE SHORT COURSE*

- Tank Venting, Blanketing, and Protection for Petroleum Storage Tanks
- Addressing Petroleum Storage Facility Risk

TRADE SHOW

JANUARY 19-20, 2021

Everyone is invited to walk-thru the trade show at **no cost**. Each day you will have access to numerous exhibitors where they will offer their expertise on their products and services.

January 19 th	8:30am – 6:00pm
January 20 th	8:30am – 1:00pm

GOLF TOURNAMENT

JANUARY 18, 2021

NISTM will be hosting its 13th Annual Golf Tournament. The shotgun will start at 7:45am and 1:15pm.

[Golf Registration Form](#)

Free admission only pertains to attending the EPA SPCC & FRP Class or the Trade Show.

**AST Focused Short Course is tentative and subject to change.*

Name(s) & Title(s): _____

Company/Organization: _____

Address: _____

City: _____

Phone: _____ Fax: _____

Cell: _____

E-mail: _____

_____ Free Short Course Attendee(s) Free Trade Show

To obtain information on the **22nd Annual Aboveground Storage Tank Conference & Trade Show**, please select the following:
(check all that applies)

- Conference Agenda Exhibitor Booth Registration
- List of Exhibitors Tanks 101 Course Tanks 102 Advanced Course
- Golf Tournament Advertising Opportunities

TRADE SHOW & CONFERENCE LOCATION

Rosen Shingle Creek Hotel	Phone: 866.996.9939
9939 Universal Blvd	Single/Double Rate: \$199.00
Orlando, FL 32819	Booking ID #77736

NATIONAL INSTITUTE FOR STORAGE TANK MANAGEMENT

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To submit this registration form, you may either Fax it to **813.591.4497** or Scan/Email it to janelle@nistm.org