RELIABILITY & MAINTENANCE CONFERENCE AND EXHIBITION

HENRY B. GONZALEZ CONVENTION CENTER SAN ANTONIO, TEXAS

MAY 23 – 25, 2018

AFPM.ORG/CONFERENCES

#AFPMRMC



TRANSFORMING OUR INDUSTRY TOGETHER

AFPM CONTINUES TO FOCUS ITS EFFORTS ON INDUSTRY ENGAGEMENT.

WE ARE INTRODUCING MORE PEER-TO-PEER COLLABORATIVE EVENTS, AND KNOWLEDGE SHARING SESSIONS

OPERATING COMPANY RECEPTION

You spoke. We listened. Here is your chance to renew old acquaintances and make new connections with your reliability and maintenance peers outside of the exhibit hall environment. This reception is by invitation only exclusively to personnel of operating companies.

KEYNOTE SESSIONS

Learn practical information to help you tackle daily professional and personal challenges at the Wednesday and Thursday keynote sessions on the Exhibit Hall stage.

SESSION TRACKS

Attend sessions led by subject matter experts on maintenance, turnarounds, reliability, and mechanical integrity. Join the roundtable discussion sessions for interactive learning. Or, select a thorough four hour professional development training session on Improving Machinery Reliability with Precision Maintenance offered each day.

TECH TALKS

Gain key take-aways from brief 10-minute introductions to new and innovative technologies and services at our Wednesday and Thursday Tech Talks in the exhibit hall.

EXHIBIT HALL

Visit with knowledge experts to find the latest equipment, technologies, and specialty services in the industry during the Wednesday and Thursday exhibition.

SCHEDULE OF EVENTS AT A GLANCE

MAY 22-25, 2018

Tuesday	May 22, 2018
1:00 pm – 6:30 pm 5:00 pm – 6:30 pm	Registration Operating Company (only) Reception by Invitation
Wednesday	May 23, 2018
7:30 am – 6:00 pm 8:00 am – 10:00 am	Registration Breakfast in Exhibit Hall with Genera Session Keynote Speaker: Michele Stuart, JAG Investigations
10:00 am – 12:00 pm	Concurrent Sessions Maintenance/Turnarounds Reliability/Mechanical Integrity Professional Development Roundtable Discussions Express Education
12:00 pm – 2:00 pm 2:00 pm – 4:00 pm 4:00 pm – 6:00 pm	Lunch in Exhibit Hall with Tech Talks Concurrent Sessions – continued Reception in Exhibit Hall
Thursday	May 24, 2018
7:30 am – 5:00 pm 8:00 am – 10:00 am	Registration Breakfast in Exhibit Hall with Genera Session Keynote Speaker: Terry Jones, WayBlazer
10:00 am – 12:00 pm	Concurrent Sessions Maintenance/Turnarounds Reliability/Mechanical Integrity Professional Development Roundtable Discussions
12:00 pm – 2:00 pm 2:00 pm – 5:00 pm	Lunch in Exhibit Hall with Tech Talks Concurrent Sessions – continued
Friday	May 25, 2018
8:00 am – 8:30 am 8:30 am – 11:15 am	Continental Breakfast Concurrent Sessions • Ethics for Engineers • Turnaround Track • Professional Development

KEYNOTE ADDRESS

8:30 am to 9:45 am Who Are You? Who Can Know and How Can They Find Out? *Michele Stuart* Owner, JAG Investigations

Michele Stuart is a licensed Private Investigator with 20 years of investigative experience. She is an Adjunct Professor with the University of Virginia and an Instructor at Quantico for multi country training programs. Michelle will show you what others can find out about you by searching social media platforms and other on-line sources. Our individual exposure from our cell phones alone is unbelievable! Learn how you can protect your personal information. This is a session you can't afford to miss.



Stuart

MAINTENANCE / TURNAROUND TRACK

Morning Sessions

10:00 am – 10:50 am Benefits Derived Through a Well-Defined Maintenance Work Process *Al Poling*, President, RAM Analytics

In this seminar, we will review the common phases of a well-defined maintenance work process as well as examine some of the critical roles needed to ensure success. We will also provide examples of the benefits to be derived through the development and implementation of a well-defined maintenance work process. A practitioner will share his experience both before and after a well-defined maintenance work process was implemented.

11:00 am - 11:50 am

Improving Accountability and Safety Through On-Demand Rental Services *Tony Raven*, EH&S Delivery Sr. Technologist, The Dow Chemical Company

This presentation will discuss Dow's applications, utilizations, solutions and results since the installment of its customizable 'rental robot' system that translates low-value activities into meaningful output.

Afternoon Sessions

2:00 pm – 2:50 pm **Effective Planning and Scheduling for Optimized Execution** *Mark Rigdon*, Manager, T.A. Cook

This presentation focuses on how an organization can adapt a culture that includes good practice planning principles, scheduling principles, and behaviors. Participants will be introduced to the key fundamental elements required to establish improved work estimations, schedule optimization, utilization, and compliance.

3:00 pm - 3:50 pm

Routine Maintenance Planning and Scheduling: Improving Planned Work Quality to Improve Productivity Rafael Gonzalez and Joshua Huber, Chevron Corporation

This presentation will address the components of improved job planning, how the initiative has been received by the refinery personnel, the preliminary results of the effort, and opportunities to further improve in this area.

RELIABILITY / MECHANICAL INTEGRITY TRACK

Morning Sessions

10:00 am - 10:50 am

A Scientific Approach to Increase the Reliability of Reciprocating Compressor Pistons

Andreas Brandl, Engineering Manager, Hoerbiger Corporation of America, Inc.

This presentation is intended for reliability engineers and operators of reciprocating compressors. Cylinder rings (piston rings and rider rings) are often cause for unplanned shut downs and subsequent high costs due to the repair and potentially lost production. Case studies will be shown and a new approach for piston engineering where the piston slippage is quantified will be introduced.

11:00 am - 11:50 am

Combining RAM Analysis with Machine Learning for Improved Reliability Robert Golightly, Sr. Manager,

Product Marketing, Manufacturing, Aspen Technology, Inc.

This presentation will look at a new Lean Daily Management approach to reliability. In this new approach, risk analysis and machine learning work together to continually and accurately predict asset failures weeks or months in advance which delivers the value of time: to plan, to coordinate and to take optimal action rather than just react.

PROFESSIONAL DEVELOPMENT

10:00 am – 12:00 pm Continued 2:00 pm – 4:00 pm

Improving Machinery Reliability with Precision Maintenance

Ian McKinnon, Owner/Chief Development Officer, Reliability Solutions Training, LP

This one-day session will clearly build an awareness to include "improvement and precision based" activities with historical "failure based" efforts. The session features live dynamic machine sets that plainly demonstrate how to move to and achieve "best-in-class" running performance utilizing precision techniques in the elimination of failure sources.

Afternoon Sessions

2:00 pm - 2:50 pm

The Challenges of Creating a Reliable Organization: The Phillips 66 Midstream Journey

Chad Broussard, Director of Reliability Midstream, Phillips 66 Michael Aroney, Director of Operations, Allied Reliability, Inc.

This presentation will discuss the implementation of Phillip 66's asset reliability implementation over several selected sites, the path it took, problems encountered and solutions discovered, to becoming a highly reliable organization.

3:00 pm - 3:50 pm

The Journey to Smarter Reliability and Maintenance in the El Segundo Refinery

Tita Ouvreloeil, Senior Reliability Engineer, Chevron U.S.A. Inc.

This presentation will illustrate the approach used to define smarter reliability and maintenance in the El Segundo refinery starting with a highlevel refinery analysis using techniques such as Weibull analysis and looking at major leading indicators such as operational availability and utilization.

Morning Sessions

10:00 am - 10:30 am

ASME PCC-1 and B16.20: How to Cost-Effectively Increase Reliability Applying These Updated Standards

Scott Hamilton, Founder, Hex Technology Jason Wright, Maintenance Superintendent, CHS Inc. Joel Baulch, Director, Engineering and Technical Services, Teadit NA Inc.

This will be an end user-focused discussion on the proper/efficient methods of applying bolted flange joint standards, while also sharing lessons learned from implementation. These moderators have worked with these standards over the years and have indepth insight on how to apply them in a cost-effective method.

10:30 am - 11:00 am

Establishing and Maintaining an Effective Plant Fluid Leak Reduction (FLR) Program John Jenco, President, JJENCO, Inc.

Discuss the major components of a successful FLR program, their general sequence and approach, typical reasons why existing attempts to minimize leakage events fail to succeed, and how to maintain an effective program for the long term.

11:00 am – 11:30 am Tightness-Based Design of Bolted Flanged Joints

Adam Arnett, North American Project Engineer, and Manfred Schaaf, President, amtec North America, Inc.

The most effective means of managing fluid leaks is to prevent them. Therefore, a tightness-based design of fluid transport connections that serves to both prevent leaks and to reduce fugitive emissions is required. This proactive, front-end approach should always be preferred from the viewpoint of the plant owner, as it reduces costs for maintenance and curtails unexpected shut-downs.

Afternoon Sessions

2:00 pm - 2:50 pm

New Maintenance Technologies: Contemporaneous Failure Time Analysis Using Poisson Probability

- *Oliver Sac*, Rotating Equipment Reliability Engineer, Chevron Phillips Chemical Company LP
- Jan Smith, Senior Reliability Consultant, and Kevin Bordelon, Director, Maintenance and Reliability Services, Zachry Group

New repair request for plant assets are routinely processed with the asset's work order histories to detect a change in failure rate that triggers human intervention before and/or during the repair, thereby avoiding future failures. The need to investigate a failure rate trend is established by statistical alarming with intervention priority also considering asset criticality, maintenance cost, and mean-time-between-failure.

3:00 pm - 3:50 pm

Advancing Process Safety Data Analysis – Maintenance and Reliability Activities that Lead to Process Safety Events Steve Mason, HollyFrontier Corporation Dan Wilczynski, Corporate Process Safety, Marathon Petroleum Corporation

A discussion of where process safety events occur and what maintenancerelated activities cause them.

EXPRESS EDUCATION

Morning Sessions

10:00 am - 10:20 am

Identifying Factors in Air-Cooled Heat Exchanger Maintenance to Improve Efficiency and Lower Costs *Chris Niebuhr*, Thompson Industrial

Services John Ghetti, FINFOAM

This presentation will be examining case studies showing how multiple banks of exchangers can be cleaned in a single shift and normal pay-back is within days of the service.

10:25 am - 10:45 am

In-Service Dry Chemical Cleaning of Fired Heater Tubes

Talmor Suchard, Sentro Technologies USA Randy Lenhart, Plant Engineering

Supervisor, CHS Inc.

This is a joint presentation between Sentro Technologies and CHS McPherson Refinery Inc. on dry chemical cleaning of fired heater tubes. This presentation will include actual cleaning results at refineries and other facilities.

10:50 am - 11:35 am **The Future is Here:**

Robotic Catalyst Removal Scott Schroeder, Advisian

WorleyParsons has been developing new technology using vacuum catalyst removal from refinery and petrochemical reactors via a remote-operated, screwpropelled vehicle. The development of CAROL (Catalyst Removal Amphirol) is in response to the increasing requirement among major hazardous facility operators to reduce human exposure to inert confined space entry. Several case studies from the beta testing period are examined. The analysis includes the challenges associated with the current catalyst removal techniques and how CAROL has been shown to provide advantages.

11:15 am – 11:35 am

Plant Turnaround Unit Deinventory and Cleaning: Vapor Control Strategies Paul Anderson, President, GEM Mobile

Treatment Services

Over the past 5 years, GEM has taken a comprehensive approach to developing environmental vapor control strategies that are integrated into the operational shutdown procedures that are mitigating safety risks, eliminating environmental bottlenecks, shortening the shutdown sequence and increasing reliability of schedule, all while meeting environmental regulatory requirements.

11:40 am - 12:00 pm

Managing the Integrity of Insulated Pressure Piping – the Right Non-Destructive Examinations (NDE) Ana Benz, Chief Engineer, IRISNDT Inc.

Examples of damaged piping and the NDE images obtained with today's techniques are summarized in this presentation. The cases are a summation of inspection programs where thousands of piping circuits were studied.

EXPRESS EDUCATION

Afternoon Sessions (Repeated from morning in reverse order)

2:00 pm – 2:20 pm Managing the Integrity of Insulated Pressure Piping – the Right Non-Destructive Examinations (NDE) Ana Benz, Chief Engineer, IRISNDT Inc.

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This presentation will be examining case studies showing how multiple banks of exchangers can be cleaned in a single shift and normal pay-back is within days of the service.

TECH TALKS

12:30 pm – 12:40 pm

Condition Assessment of Electrical Medium Voltage Equipment with Electromagnetic Interference (EMI) Analysis James Timperley, Doble Engineering Company

This presentation will provide a technical discussion on EMI technology, along with case studies of conditions found at several on and off shore sites.

Additional Talks to be announced

KEYNOTE ADDRESS

8:30 am – 9:45 am

Keynote Terry Jones, WayBlazer

Best known for founding Travelocity. com and serving as founding Chairman of Kayak.com, companies that revolutionized how travel was purchased, Terry Jones is a thought leader on innovation in our increasingly digital world. He will illustrate how challenging and ultimately rewarding it can be to gather a team and establish a culture that is open to change and is committed to innovation as the way to do business. Terry shares simple but powerful ideas to create a more innovative organization.



Jones

MAINTENANCE / TURNAROUND TRACK

Morning Session

10:00 am – 11:50 am Contracting Strategies Discussion Session

Hardy Kemp, Director, Projects & Turnarounds, Flint Hills Resources, LP *Gerry Brooks*, Maintenance and Reliability Manager, Axiall, a Westlake Chemical Company

Contractor Management is essential to achieve the highest contractor performance and ensure successful execution of maintenance, plant outages/ turnarounds and capital projects. Developing effective contracting strategies is imperative to ensure safety, schedule compliance, cost tracking, manpower plans, progress measurement, productivity, quality control and work scope changes are properly managed. This 2-hour in-depth discussion session will explore various methods and techniques to effectively manage and ensure contractor success.

Afternoon Sessions

2:00 pm – 2:50 pm Defect Elimination Execution at Gallup Refinery Scott Hinds, Strategic Reliability

Leader, Andeavor

This presentation will chronicle a reliability initiative of a work execution management system of defect elimination at the Gallup refinery in New Mexico. The discussion will include the initiation and development of the program, highlighting the bad actor identification, the RCFA efforts, training, and the KPI's used to determine the success of the program.

3:00 pm – 3:50 pm

Refinery Sector Rule SSM Impacts – Compliance and Optimization

Andy Shurtleff, Market Segment Manager, Refining and Petrochemicals, Air Liquide

This presentation focuses on the Rule which goes into effect January 30, 2019, and new requirements to monitor and control flare tip NHVs (Net Heating Values) at levels above 270 BTUs during process unit venting, nitrogen pumping and steam out phases to enhance Destruction Removal Efficiency (DRE) of Hazardous Air Pollutants (HAPs).

4:00 pm – 4:50 pm **The Digital Turnaround: What? Why? and How?** *Paul Muir.* Mobideo

This will be a discussion about what digitalization is and how it can be applied to provide benefits and solve real problems in the challenging and dynamic environment of a turnaround. An interactive customer case study of a recent turnaround with an owner/operator will be discussed to illustrate a real solution that can be delivered today with immediate benefits.

RELIABILITY / MECHANICAL INTEGRITY TRACK

10:00 am - 10:50 am

Partnering to Zero in on Corrosion Under Insulation with NDE and In-Touch Software

Michael Nichols, Fixed Equipment Specialist, Marathon Petroleum Corporation Michael Townsend, Operations Director,

IRISNDT

The tasks, software and specialized nondestructive testing needed to manage the inspections project are presented along with some of the discovered sections of corroded piping.

11:00 am - 11:50 am

Achieving Equipment Reliability through Investigating Plant Precursor Failures and Lessons Learned from Plant Failures to Achieve Equipment Reliability

Daniel Benac, Senior Principal Engineer, Baker Engineering and Risk Consultants, Inc.

Hear how review and analysis of minor plant failures can help to avoid major events. Multiple small equipment case histories and the lessons learned from these failure investigations will be presented.

2:00 pm – 2:50 pm

Lessons Learned with IOW Implementation Programs – Traps to Avoid

Mark Geisenhoff, Global Fixed Equipment Leader, Flint Hills Resources, LP

Michael Urzendowski, Technical Advisor, Valero Energy Corporation

Clay White, Director, Mechanical Integrity, Phillips 66

Three panelists with a combined owneruser experience totaling over 75 years will review the top ten steps that need to be carefully planned and implemented to avoid pitfalls in an IOW implementation program.

3:00 pm - 3:50 pm

IOW Technology Templates to Improve Consistency in the Deployment of API RP-584 Across Refineries

Chuck Koske, Chevron Corporation

Identification, classification and configuration are essential elements for refiners in the development of effective Integrity Operating Windows (IOWs). Having an efficient process to incorporate subject matter expert (SME) input into these steps can benefit the refiner with a more consistent deployment of API RP 584 within their refining system.

4:00 pm - 4:50 pm

Oil Refinery Sulfidation Corrosion

John Holderith, Chief Inspector, Billings Refinery, Phillips 66

This presentation will outline the primary sulfidation damage mechanisms including what, where, and how it occurs in oil refinery process units. Methods of inspection for detection of sulfidation corrosion will be presented, and prevention of failures will be covered.

PROFESSIONAL DEVELOPMENT

10:00 am – 12:00 pm Continued 2:00 pm – 4:00 pm (Repeat of Wednesday's session)

Improving Machinery Reliability with Precision Maintenance

Ian McKinnon, Owner/Chief Development Officer, Reliability Solutions Training, LP

This one-day session will clearly build an awareness to include "improvement and precision based" activities with historical "failure based" efforts. The session features live dynamic machine sets that plainly demonstrate how to move to and achieve "best-in-class" running performance utilizing precision techniques in the elimination of failure sources.

ROUNDTABLE DISCUSSIONS

Morning Sessions

10:00 am - 10:50 am

Advancing Process Safety - Sharing Practices to Prevent Process Safety Incidents; Walk the Line and Others

Bill Clark, Process Safety Manager, Phillips 66 *Steve Mason*, HollyFrontier Corporation *Dan Wilczynski*, Corporate Process Safety, Marathon Petroleum Corporation

A discussion and small group activities of practices that can be used to prevent process safety events and advancing process safety tools developed to prevent maintenance related process safety events.

11:00 am - 11:50 am Workforce Challenges

Gerry Brooks, Maintenance and Reliability Manager, Axiall, a Westlake Chemical Company Robert Parker, President, Repcon, Inc.

The improving economy has brought about a rise in both construction activity and construction jobs. The construction labor force remains below its prerecession peak. This is particularly true for the skilled labor force and many new entrants lack the most needed skills. Construction backlog is at an all-time high and with an estimated demand of more than 6.1 million craftsmen during the next five years resulting in a deficit of 1.4 million or more workers if the industry fails to replenish the skills lost to retirement. This session will explore what Owners and Contractors can do or are doing to address these deficiencies.

Afternoon Sessions

2:00 pm - 2:50 pm

Virtual Training: Augmented Reality and Virtual Reality Based Solutions for Operational Excellence Ujjal Basu, Schneider Electric

This session will discuss the use and benefits of augmented reality- and virtual reality-based solutions for operational excellence.

3:00 pm - 3:50 pm

Panel Discussion: Hurricane Lessons Learned

Moderator: *Jeff Gunnulfsen*, Senior Director of Security & Chemical Risk Management, AFPM Panelists: *LCDR Navin Griffin*, Chief, Waterways Management & Facilities,U.S. Coast Guard *Gary Scheibe*, Security Manager, Shell Deer Park Refinery You prepared for a hurricane, but got a 500 year flood.

4:00 pm - 4:50 pm

Hard Hat Heroes and Our Construction Career Pathways Initiative

Jennifer Wilkerson, Director, Marketing Public Relations, and Christina Catron, Marketing and Design Senior Manager, National Center for Construction Education & Research (NCCER) John Boerstler, Executive Director, NextOp

TECH TALKS

12:30 pm – 12:40 pm Asset Integrity Monitoring Through Installed UT Sensors

Steven Strachan, Vice President Sales, Sensor Networks, Inc.

This presentation will include the design principles used in the creation of a fully digital and more cost-effective corrosion monitoring system. This next-generation platform, end-user input used to refine the design, and recent installations, operational improvements and case studies for how the technology has benefited asset owners and operators will be discussed.

12:45 pm - 12:55 pm

External In Lieu of Internal Inspection/ Non-Intrusive Inspection

Russ Davis, National AIMS MI COE Manager, MISTRAS Group Inc.

NDE technology has progressed to the point where external inspection can provide extremely detailed information which, in many cases, is better than can be obtained internally; and it is much safer to obtain. This presentation will discuss and outline how to implement an external in lieu of internal/non-intrusive inspection program.

Additional Talks to be announced

ETHICS FOR ENGINEERS

8:30 am - 9:30 am Ethics for Engineers

Paul Magallanez, Valero Energy Corporation

The ethics workshop will review engineers' roles and responsibilities in applying professional engineering ethics to their professional conduct. The discussion will begin with a definition of ethics and then discuss situations where ethics are brought to bear. This workshop is intended to provide the training needed to maintain a professional engineer's license in those states that require one hour of training per renewal period. AFPM will provide certificates of attendance to those who attend.

TURNAROUND TRACK

8:30 am – 11:15 am Chemical Cleaning Roundtable Discussion

Hardy Kemp, Director, Projects & Turnarounds, Flint Hills Resources *Clayton Shoemaker*, Director of Turnaround Best Practices, Valero Energy Corporation

Chemical cleaning has been a key driver to successfully improving safety, environmental impacts, and overall turnaround downtime. We are facing a continued increase in regulations and a never-ending drive towards improved asset performance and increased availability. This session will engage participants in a discussion involving industry best practices as well as collaboratively address some challenges we are facing today.

PROFESSIONAL DEVELOPMENT

8:30 am – 11:15 am Improving Machinery Reliability with Precision Maintenance

Ian McKinnon, Owner/Chief Development Officer, Reliability Solutions Training

This presentation utilizes a "House of Reliability" model to introduce and discover the "Reliable and Predictable Plant". We will quickly review what a blueprint for reliability improvement includes, with considerations given to laying the correct foundation, developing managing metrics – including technologies, and improving existing skills.

EXHIBITOR LIST

REGISTER NOW AT AFPM.ORG

This year's exhibition is one not to be missed! Approximately 150 exhibiting companies will be available to answer all your technical questions. With expanded show hours, spend quality time with them to explore all the services you need. Exhibitors as of April 17, 2018

A&L Industrial Services Adhesive Services Company Advanced Compressor Technology Air Products Alfred Conhagen Inc Alfred Miller Contracting AltairStrickland AMACS Process Tower Internals Apache Industrial Services, LLC. APTIM Aspen Aerogels Asset Performance Networks Austin Industrial. Inc. Babcock & Wilcox Baker Hughes Process & **Pipeline Services** BLAC INC. Brahma Group, Inc. BrandSafway Brock Group **Brown & Root Industrial Services** Calculated Controls/Pro-Surve Carber Holdings Carboline Cardno, Inc. CATSI, Inc. Cat Tech International Century Elevators Citadel Technologies Clean Harbors Cokebusters USA Inc. The Colt Group Cooling Tower Depot, Inc. CTI Industries, Inc. **Cudd Energy Services** Curran International, Inc Curtiss-Wright, EST Group Cust-O-Fab, LLC D. D. Technology, Inc DeHumidification Technologies, LP Delta Refractories, Inc. Delta Tech Service, Inc. "The Chemical Cleaning Company" DeltaValve Deltek Design Maintenance Systems Inc. Doble Engineering Company

Doxsteel Dunn Heat Exchangers **DuPont Sustainable Solutions Dynamics Scientific Production Center** USA. Inc. The Equity Engineering Group, Inc. **ERIKS North America** Ethos Energy Field Services Evergreen North America Industrial Services Flexitallic GALLOP TFS **GEO Heat Exchangers** Gerlinger Carrier Graywolf Industrial Company Gulfspan Industrial, LLC Hahn & Clay, Ltd. Hason Steel Products Inc. Hi-Tech Weld Overlay Group Hotwork-USA Hudson Products/Chart Lifecycle Hunter Buildings & Manufacturing, LP Hydratight Hydrokinetics Hyspan Precision Products, Inc. ICS, Blount International IMI Z&J IMPACT Infrared Cameras Inc. Innovative Ventilation Systems Integrated Service Company LLC (InServ) International Cooling Tower USA, Inc. InterPlan Systems Iris Inspection Services, Inc. **IRISNDT** Inc. ITH Engineering, Inc J.J. White. Inc. J.T. Thorpe & Son, Inc. (JT THORPE) Jayne Industries, Inc. KnightHawk Engineering, Inc. Koch Specialty Plant Services, LLC Lamons Lifting Gear Hire Linde Engineering North America Inc. Lloyd's Register Manufacturas Petroleras S.A. de C.V. Matrix Service McDonough Elevator Sales & Rentals MISTRAS Group, Inc. Mobideo Munters Corporation NDT Seals, Inc. NRI Ohmstede

Onis Line Blind **Optimal Field Services** P.A. Inc. ParFab Companies PdMA Corporation Petrochem Field Services PK Technology Plant Services, Incorporated PROGNOST Systems, Inc. ProVent Technologies LLC. QMax Industries. Inc. Quantum Technical Services Rain for Rent Redguard Reliability Solutions Training, LP Rentech Boiler Services.Inc. Repcon, Inc. Resco Products. Inc. Satellite Shelters, Inc. Sensor Networks, Inc. Sentinel Integrity Solutions Sentry Equipment STARCON International, Inc. STC STRUCTURAL GROUP Sulzer Chemtech Sunbelt Rentals T. F. Hudgins Inc. TapcoEnpro Teadit North America, Inc. Team Industrial Services Texas Steam & Instrumentation / Steam Solutions Total Industrial Services Specialties, Inc. Total Safety TriStar Global Energy Solutions Tube Tech International Inc. Turnaround Welding Services Turner Industries Group United Rentals, Inc. United Safety Universal Plant Services, Inc. USA DeBusk USA Industries, Inc. Vallen Safety Services Valtech Engineering VEGA Americas, Inc. Waukesha Foundry, Inc. Western Technology, Inc. WHM Custom Services Wood Group Woven Metal Products Wyatt Field Service Company Zeeco. Inc.

ETHICAL RESPONSIBILITY AND PROFESSIONAL AND PERSONAL CONDUCT CODE

AFPM ENTERTAINMENT POLICY

The American Fuel & Petrochemical Manufacturers ("AFPM") has adopted the following "Ethical Responsibility and Professional and Personal Conduct Code" (hereinafter, "the Code"), Every member of AFPM, their designated representatives, and non-member attendees at all AFPM meetings and forums agree to abide by the Code as a condition of membership in AFPM and attendance and participation at AFPM meetings and forums.

The Code requires the following of all individuals attending AFPM meetings and forums:

- Adherence to the AFPM bylaws and the AFPM policies and procedures, as adopted by AFPM's Board of Directors.
- Strict compliance with federal antitrust laws
- Adherence to all applicable federal and state laws
- Maintenance of the highest level of professional and personal ethical behavior while attending AFPM meetings and forums.
- · Prevention of certain behaviors, including harassment, violence, intimidation and discrimination of any kind involving race, color, religion, national origin, gender, sexual orientation, age, disability or, where applicable, veteran or marital status.

- Assurance that conduct at all times and in all professional and personal dealings with each other and other attendees is with the highest level of integrity and courtesv.
- Sharing of knowledge and expertise as speakers at AFPM educational events and sessions whenever practicable, without soliciting or explicitly promoting their own organization's products or services.
- · Working to instill public and consumer confidence in the petrochemical and refining industries, its member companies, and its professionals, avoiding any action conducive to discrediting members of AFPM.
- Refraining from scheduling general attendance meetings, receptions or other events at times that conflict with substantive programming or social events • Food, beverage and service personnel at AFPM meetings without express written permission of AFPM.

Failure to abide by the Code may result, for the first offense, in informal censure of a company or individual by the AFPM Executive Committee. If violations of the Code continue after such an informal censure, a company may be subject to expulsion from AFPM, or an individual to exclusion from participation in AFPM activities, by the Board of Directors.

We ask your cooperation in observing Association policy on activities held in conjunction with any AFPM meeting:

- Meetings or social activities should not be scheduled that take registrants away from AFPM programs and AFPMsponsored activities;
- Any company sponsoring a function to which 25 or more people are invited should outline its plans for advance approval by AFPM. In general, such functions will be approved if they do not unduly take registrants away from AFPMsponsored activities;
- All representatives of companies sponsoring hospitality activities are expected to register for the meeting;
- · Hospitality suites are expected to close by 1:00 am;
- (bartenders, hostesses, etc.) must be obtained through the hotel catering department;
- Suite promotional activities are to avoid the use of elaborate entertainment, expensive door prizes, suite attendance solicitation by individuals who are not full-time employees of the sponsoring company, or other similar activities.