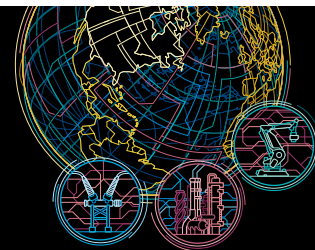


Harnessing the power of change

ABB Automation & Power World

March 2-5, 2015 | Houston, TX



Industry-focused curriculum for chemical, oil and gas

Listed by session time

Monday, March 2 – 1:00 p.m. - 2:00 p.m.

401301 **Functional safety: requirements into design (bridging the specification gap)**

Safe operation requires the correct allocation of risk reduction to instrumented protective layers and management of the potential mismatch between the hazard and risk analysis information. The development of a safety requirements specification (SRS) is a critical technical challenge for end users. The SRS must be more than just a documented version of the cause and effects diagram in order to bridge the potential SRS information gap.

401401 **Migrating multiple vendors' control systems using state-of-the-art technologies with IT on board**

Air Products migrated a fleet of control systems over hundreds of sites and geographic locations. Existing systems from several control vendors had to be updated to the latest in Microsoft patchable systems, while conforming to current cyber security recommendations; they also had to be operable from a remote location with a common look and feel across all systems. Air Products was able to meet the requirements of the project within a focused time frame. Their success was enabled by a unified company organization and significant IT involvement.

701401 **Managing operational risk with confidence**

Chemical, oil and gas companies are seeking real-time visibility of risk and avert events that could impact production. This session introduces process safety management software from ABB that compiles risk across the enterprise using layers of protection analysis (LOPA), instrument reliability and real-time data. It compares actual and intended risk, graphically displays the level of risks and advises actions across both operations and maintenance in the form of tasks, electronic standard operating procedures (SOPs) and inspections.

601201 **Distribution automation applications using Tropos wireless communications**

This session concentrates on several distribution automation examples using ABB-Tropos wireless communications. It examines high speed applications employing IEC 61850 8-1 GOOSE across Tropos wireless communications and compares test results for Tropos wireless communications versus hard wire LAN.

301101 **It's all about the people: developing project management capabilities**

Capability development and competence play an important role in achieving project success and customer satisfaction. ABB's Learning, Coaching and Certification program contributes to these objectives and ensures the continuously increasing skills of project managers and others.

701001 **Collecting and analyzing motion, electrical and temperature data for better drive performance**

Every process industry producer has motion in common: drive control motors turn, take energy and produce heat. To keep production moving, those three factors must be monitored. This session introduces methodologies to collect motion, electrical and temperature data and then analyze it to produce key drive performance indicators. Indicators outside thresholds are prioritized and displayed so users can identify issues before motion is affected. These approaches also produce recommendations for continued smooth drive performance, even sending notifications when indicators exceed thresholds.

701201 **Lessons learned during application of MV GIS in oil and gas critical applications**

This case study features a real application of medium voltage (MV) gas insulated switchgear (GIS) in critical installations; namely, power system upgrades to existing offshore oil and gas platforms in Alaska. The consulting engineer on the project and the product application engineers review the differences between air insulated switchgear (AIS) and GIS, including the selection criteria, technical differences and installation and operational differences. They also share lessons learned from the project.

801301 **Corrosion: extending the life of your electrical system • (NOTE: 2 hour session) CEU CREDIT**

This session investigates the effects of corrosion on the performance of electrical systems; the science, types and results of corrosion; and methods and techniques to protect electrical system infrastructures.

Monday, March 2 – 1:00 p.m. - 2:00 p.m. (continued)

- 801501 **Intelligent monitoring solutions for high voltage breakers, transformers and MV switchgear**
Solution intelligence makes the difference in condition-based and remote monitoring solutions. This session demonstrates ABB's newest solution for power assets (circuit breakers, power transformers and switchgear). Continuously fed data keeps an eye on the equipment even when it is remote. From a dynamic health score to real-time results that yield root cause analysis of problems, ABB's solution uses the power of data to drive down operation and management (O&M) costs while improving reliability and availability.
- 801601 **Intelligent low voltage motor control centers**
Downtime can prove extremely costly in critical process applications. The protective and troubleshooting functions possible with intelligent motor control centers improve productivity and minimize downtime. This session looks at technology considerations, configuration types and cost advantages possible with intelligent motor control center applications.
- 801807 **System 800xA alarm management • (NOTE: 2 hour session)**
This session explores advanced features of alarm management in 800xA, including priority, grouping, shelving, hiding, response and analysis.

Monday, March 2 – 2:30 p.m. - 3:30 p.m.

- 401002 **Chemical injection optimization**
This session describes three different ways to inject chemicals: continuous, batch and chemicals with plunger lift. The continuous method is based on a rate. For foamers, as the flow rate drops, the amount of chemicals increases. The batch method calculates the amount of fluid in the well and calculates the amount of time the chemical pump needs to be on to inject the proper amount of chemicals. With plunger lift, when the well is closed, the same calculation as in batch is done and the slug is treated.
- 401102 **Optimizing Harmony DCS performance**
Learn about advanced Harmony diagnostics available in your system, how to assess system performance and how to proactively assess potential performance problems. Communication loop performance issues may cause temporary system performance degradation; and some system settings restrict maximum communication and module reporting errors. The Harmony Performance Fingerprint can be delivered on site or remotely through the ServicePort Service Delivery Platform. ABB service engineers can help analyze data and identify issues to improve performance.
- 401202 **Improving operations by taking asset health to the next step**
Asset health is typically looked at as independent components: asset monitoring, reliability and computerized maintenance and management systems (CMMS), for example. ABB has combined these components into a complete, integrated process, including securely collecting device data, applying real-time condition monitoring for immediate visibility into issues, performing a comprehensive asset reliability analysis and integrating the results with a variety of CMMS. This session details the only complete device-to-enterprise solution available today.
- 401302 **Special considerations for upgrading safety instrumented systems**
Over the last 30 years, the process industries have implemented different digital technologies to mitigate process risk, including programmable logic controllers (PLCs), distributed control systems (DCSs) and safety logic solvers. ABB has supplied numerous technologies over that timeframe, some of which do not conform with current industry standards. This session explores issues affecting systems installed in the last 30 years and activities to address compliance gaps, including safety life cycle activities.
- 301001 **Multi-country electrical motor frame agreement: benefits, process and considerations**
Large oil and gas projects involve many OEM packages, compressors, pumps, fans and so on, which are normally procured through the engineering, procurement and construction (EPC) contractor. On these packages, the electric motor could be coming from several different vendors. How does the end user ensure they are getting what they require? ExxonMobil and ABB present the business case for a motor frame agreement, including commercial, technical and life cycle benefits as well as the process and considerations used to achieve a multi-country frame agreement for motors.
- 301102 **Project management: the difference between success and failure**
This session investigates the core competencies of project management and the role they play in the success or failure of an engineering, procurement and construction (EPC) project. Learn how to properly set up and manage the project through the use of schedule and cost controls over the entire duration. The session also discusses risk and change management, along with supplier/contractor management.

Monday, March 2 – 2:30 p.m. - 3:30 p.m. (continued)

701402 Solve system and process issues fast with automated analysis and remote-enabled access to expertise
Demand for advanced system and process expertise is growing, and the question for producers is how to access and deliver this expertise, notably in remote locations. ABB created ServicePort to bring process expertise to customer sites through a secure, remote connection that helps diagnose, implement and sustain system and process performance. Learn how automated data gathering and analysis can help you swiftly address system and process issues. Wherever your site is, whenever support is needed, these tools deliver process expertise safely, securely and proactively.

801502 Repair and overhaul of ABB high voltage breaker operating mechanism
Proper mechanism maintenance is one of the key factors to maintaining an abundance of reliable energy during the life of your high voltage circuit breaker, gas insulated switchgear (GIS) or generator circuit breaker (GCB). During this hands-on training session, learn how to diagnose common mechanism issues and how to overhaul and repair ABB type HMB (hydraulic-spring) mechanisms.

Monday, March 2 – 4:00 p.m. - 5:00 p.m.

- 401003 Styron case study: MOD5 migration to System 800xA**
How would you like the challenge of migrating legacy DCS systems at 38 plants scattered around the globe within the next five years? This is precisely the challenge that Styron has accepted. This session explains how Styron and ABB are working together to meet this challenge. It encompasses the management of a global engineering team and session, the application conversion tools developed to help streamline the overall effort and some of the successes and hurdles to date.
- 401103 Control system cyber security: detect threats, reduce risk and begin the life cycle security process**
Cyber security is a new business risk. How do you assess it, identify threats and reduce risks? Will a cyber security investment only protect or can it improve performance? Cyber security can be addressed in a way that identifies threats, mitigates risks and improves performance. Yet control system cyber security is not a one-time event, but an ongoing process. This session identifies best practices, standards and services available for self-maintainers and those wanting more help. It covers basic controls, as well as how to identify and address gaps to minimize risk and maximize reward.
- 401203 Keys to effectively deploying a reliability-centered maintenance strategy that maximizes asset life**
This session explores the elements to effectively deploy a reliability-centered maintenance (RCM) strategy that supports operational excellence and financial performance. Run-to-failure (RTF), preventive maintenance (PM), predictive maintenance (PdM) and condition-based maintenance (CBM) are common. A blend of run-to-failure and preventive maintenance is the typical approach for many industrial plants. The challenge is to develop a balanced strategy that ensures asset performance, process availability and low life cycle cost. A reliability-centered maintenance strategy provides this balance.
- 401303 Effective ICS cyber security: physical, process control and information technology**
Gone are the days when physical security, process control security and cyber security could be treated as separate functional areas. Recognizing and capitalizing upon the broad commonality of security domains across all the three security functional areas can open many more possibilities to enhance an enterprise's defenses. By extending this methodology, this session provides a framework for a strategy that lets industrial control system (ICS) professionals quickly analyze threats across all three environments.
- 401403 Enabling real-time data access to improve oil field operations**
Real-time broadband data access in the oil field enables a range of applications that improve business operations for field operators. From intelligent well head monitoring to field intranet access and video, broadband communications can improve productivity while reducing windshield time for workers. This session features examples of data applications and results from real customer deployments in North America.
- 301002 Emotional intelligence: people smarts for technical professionals**
Technical competence is not enough if you can't build and sustain relationships both professionally and personally. Emotional intelligence (EI) is a key predictor of leadership effectiveness and a better predictor of success in work and life than IQ. Fortunately, EI is a learned skill that can be developed. Self-awareness and self-management are important for managing emotions and responses in the moment. Learn about the observation and communication skills that foster social awareness, allowing you to better manage relationships.
- 801302 Russellstoll power connections in hazardous applications in the oil and gas industry**
A pin and sleeve electrical interconnection solution provides maximum safety, durability and performance for portable power centers, mobile equipment and other applications in dry, damp, wet or marine conditions and hazardous locations.

Monday, March 2 – 4:00 p.m. - 5:00 p.m. (continued)

801003 **Easy to implement IEC 61850**

This hands-on session focuses on the use of IEC 61850. The IEC 61850 protocol supports a method to directly exchange data between two or more intelligent electronic devices (IEDs). The concept is based on sending a multicast over the Ethernet. Whoever needs the information, detects the telegram by its source address, reads the telegram and deals with it. In this session's exercise a load can be fed from two sources; only one source can be connected at a given time.

801603 **Flow metering: a guide to proper selection and practice**

Unravel the mysteries of flow technology selection, learn how different flow meters work and when (and when not) to use them. Quickly get up to speed on the basics of flow metering, including the flow pioneers, terminology, installation practices, flow profiles, flow disturbances and flow meter selection. Get a solid understanding of the many nuances associated with the selection of flow meters and associated products.

Tuesday, March 3 – 10:00 a.m. - 11:30 a.m.

201001 **Chemical, oil and gas industry forum**

Fueling the world: meeting the global need for energy in a changing landscape

Operating conditions today evolve at an ever-increasing pace. Technological advances, shifts in workforce demographics, tight capital budgets and increased public scrutiny are just a few of the challenges facing companies in the chemical, oil and gas industries. Experts from operating companies, industry analysts, EPC companies and technology providers discuss what they consider to be the most pressing concerns for the industry in the short and long terms and the steps they are taking to deal with those challenges.

Tuesday, March 3 – 1:00 p.m. - 2:00 p.m.

401004 **Virtualization of a refinery DCS: YPf Lujan de Cuyo refinery**

If you worry about the security, reliability and serviceability of your control system keep you up at night, learn how YPF's Lujan de Cuyo refinery used virtualization to increase the robustness and availability of their 800xA system. By virtualizing the domain controllers, aspect and connectivity servers and implementing triple redundancy of the server hardware, several benefits were achieved, including geographic separation of servers and software management of the virtual networks, which reduced maintenance costs.

401304 **Technology to enable process safety compliance**

Safety is among the top concerns affecting process operators worldwide, not only compliance to local and international regulations but to effectively avoid the risk in the production process. The industry typically implements process safety and risk reduction mechanisms using different and disconnected systems, thereby losing the ability to effectively assess and reduce risk. This session discussed how integrated systems help streamline the management of process safety, and improve operators' ability to head off escalating process conditions before automated intervention is needed.

401404 **Advanced integrated operations and FPSO solutions**

Digital oil field integration is a key enabler, contributing to process performance, asset health, productivity, safety and lean operations. Real use cases of offshore oil and gas projects reveal that integrated operations facilitate safe and efficient project handover and asset operation. Floating production storage and offloading (FPSO) and floating production units (FPU) offer unique challenges: remoteness, limited storage and accommodation and long turnover cycles. Discover how advancements in FPSO and FPU solutions help meet production targets.

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Tuesday, March 3 – 1:00 p.m. - 2:00 p.m. (continued)

- 301104 **Managing project risks and dealing with the surprises**
Project risks are inevitable, but how are they managed or controlled? What about risks that weren't identified in the planning stage? What can be done about them? This interactive session examines different risk response strategies and proven techniques to manage and control previously identified and emerging risks during the implementation phase of the project.
- 701004 **Increased reliability of air cooled heat exchangers: a direct drive solution for ACHE fans**
The maintenance cost and reliability of air cooled heat exchanger (ACHE) motors in refinery and chemical plants can be a major concern. With over 300,000 ACHE motors installed in the US, the opportunity to improve reliability is huge. Typically, ACHE motors connect to the fan with a belt and sheave arrangement that requires significant maintenance; also, they are located in areas that are difficult to access without special lifting equipment. Permanent magnet (PM) motor technology provides a direct drive solution to eliminate the belts and sheaves and reduce motor maintenance.
- 801005 **Easy to implement IEC 61850**
This hands-on session focuses on the use of IEC 61850. The IEC 61850 protocol supports a method to directly exchange data between two or more intelligent electronic devices (IEDs). The concept is based on sending a multicast over the Ethernet. Whoever needs the information, detects the telegram by its source address, reads the telegram and deals with it. In this session's exercise a load can be fed from two sources; only one source can be connected at a given time.
- 801313 **ABB control panel solutions • (NOTE: 2 hour session)**
Panel builders must source the right control product for each application, given cost pressures, labor costs and more. The combination of ABB and Thomas and Betts brand products provides control panel builders with a single source for their control panel needs, including circuit breakers, motor starters, contactors, programmable logic controllers (PLCs), drives, wire duct and TyWraps. ABB can help panel builders lower their costs and build more profitable control panels.
- 801604 **What do you need to know about cyber security?**
Cyber security isn't just about geopolitics, the banking system or the energy grid. Most cyber security issues are more basic, such as unsuspecting employees opening innocent-looking files that are really viruses or malware on a home PC that makes it onto a flash drive taken into work. This session addresses what you need to know about cyber security, but didn't know you should ask, such as how to begin addressing cyber security when you have no budget or resources; how to initially assess your situation; and how determine first steps to improve (useful when you need to ask for a budget).
- 801803 **System 800xA human/machine interface with PG2 graphics • (NOTE: 2 hour session)**
In this 2-hour hands-on technical training session, learn about the 800xA console and PG2 graphics, including the operator workplace, graphic elements, faceplates and graphic displays.
- 801808 **System 800xA alarm management • (NOTE: 2 hour session)**
This session explores advanced features of alarm management in 800xA, including priority, grouping, shelving, hiding, response and analysis.

Tuesday, March 3 – 2:30 p.m. - 3:30 p.m.

- 401005 **Demystifying the industrial internet of things (IIoT)**
For several years the phrase internet of things (IoT) has been highlighted in the media as a way to transform manufacturing, with a lot of emphasis being placed on how low-cost sensors and internet connections will drive new decision making models for manufacturing and maintenance. Using examples from industry, this session examines the hype, reality and potential of the industrial internet of things, as well as other related technologies such as cloud computing and big data, looked at in the context of the modern industrial plant.
- 401105 **Delivering a successful migration project at Dow: MOD5 to 800xA**
This session targets existing or prospective owner or operator of System 800xA who would like to reduce their automation solution's cost of ownership. System 800xA's architecture and deployment options, including virtualization, the use of 800xA's automation platform and application consolidation, are among the many money saving, productivity enhancing topics discussed.
- 401305 **A practical approach for implementing functional safety according to IEC 61511**
End-users need a practical approach for functional safety management throughout the life cycle of a plant. The IEC 61511 standard covers safety life cycle phases from initial concept, design, implementation, operation and maintenance through to decommissioning. This session addresses organizational responsibilities and provides examples of the documentation required when working with the safety life cycle according to the IEC 61511 standard. It also covers upcoming changes as defined in Edition 2 and their impact on end users.

Tuesday, March 3 – 2:30 p.m. - 3:30 p.m. (continued)

- 301005 **Town Hall with ABB CEO Ulrich Spiesshofer**
This special session is exclusively for ABB customers and partners, a chance to hear about ABB's vision for the future direct from CEO Ulrich Spiesshofer and other ABB senior managers. Join in a candid and open discussion on a range of topics focused on facing the challenges in today's global marketplace.
- 301105 **Complex projects: why they often fail and what to do about it**
Failure rates for large and complex projects remain high across industries. As complexity increases, project leaders and their organizations must address challenges that require different approaches than those that work in "traditional" project environments. This session discusses the factors that lead to project complexity, how to measure complexity at the outset and what organizational and project infrastructures are required to improve performance in critical areas, such as interface management, change control and risk management.
- 601405 **Effective management of natural disasters affecting industrial electrical systems**
Newly published Institute of Electrical and Electronics Engineers (IEEE) Standard 1716, Presidential Policy Directive #8, and National Fire Protection Association (NFPA) 1600 form the basis of this comprehensive discussion addressing the resilience of industrial electrical systems. Business continuity and disaster management continues to be an emerging business trend in the industrial arena. Learn what disasters could shut your facility down, how to be prepared and the economic impacts if proper preparations are not made.
- 701405 **Application libraries for COG process control and safety**
This session reviews the application libraries used in the oil, gas and petrochemical industries, their global distribution and their customer value in all the phases of automation system design, implementation and maintenance. The libraries are designed for the 800xA system and AC800M controller family. Newly added features in the latest release are covered as well as the roadmap for 2015 and beyond.
- 801006 **Automatic transfer scheme (ATS) via IEC 61850 GOOSE**
An automatic transfer scheme (ATS) assists electric power system control and automation operations. In a main-tie-main bus configuration of two independent sources with a normally open tie breaker, ATS can automatically restore a bus affected by loss of its main source. Automatic retransfer occurs by opening the tie breaker and closing the affected main breaker once the source returns. This session shows how to develop a generic object oriented substation event (GOOSE) ATS scheme; it requires a basic understanding of power system protection philosophy, PCM600 software and the REF615 relay.
- 801104 **ACS880 AC drive configuration: hands-on experience • (NOTE: 2 hour session)**
This hands-on laboratory reviews the ACS880 AC drive and demonstrates the key software characteristics that make it the optimal solution for any industrial application. This session gives you access to the ACS880 demo case and the opportunity to commission the drive from start to finish and then edit parameters to configure the drive for application-specific tasks.
- 801206 **Panel Builder 800: programming basics for version 6**
In this hands-on session, program the Panel Builder 800 to communicate with AC800M using a memory membrane system (MMS), and learn the basics of building graphics using standard libraries and configuration to set up communication with AC800M. Find out how data can be exchanged using the built-in drivers.
- 801605 **Low or medium voltage drives: considerations for selecting the right drive for your application**
Operationally, a medium voltage drive is almost indistinguishable from a low voltage drive. The differences lie in topologies, protection schemes, sensing, monitoring and other application-specific concerns. Find out when it makes sense to choose low or medium voltage drive technology for your application.



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Tuesday, March 3– 4:00 p.m. - 5:00 p.m.

401006 **Next generation ABB subsea power solutions**

Together with Statoil and two other oil companies, ABB is developing the next generation subsea power solution, suitable for systems up to 100 MW, depths of 9000 feet (3000 meters) and very long transmission distances. This session provides a midway update on this five-year, \$100 million development effort, as well as the latest news on ABB's present subsea power portfolio and capabilities.

401106 **Panel on automation DCS evolution for industry**

Interested in evolving or modernizing your System 800xA or heritage ABB system? Concerned about the justification, where to start and what questions to ask? System modernization can extend the life of your DCS, lower the cost of ownership and increase the value it provides to your plant. In this session, ABB experts discuss best practices developed from performing hundreds of DCS evolution projects and taking advantage of new technology within the framework of an existing DCS. Topics include life cycle audits, evolution planning, FEED studies, convert or enhance decisions and more.

401306 **The value of instrument reliability**

Instrumentation is widely used to maintain the process health and safety of an asset. Instrumentation manufacturers' data becomes the critical data used by asset owners in determining component selection in applications. Therefore, the reliability of instruments and field devices is vital to ensure equipment protection goals are met. This session examines new ABB software capabilities to collect and analyze "proven in use" data to determine how the instrumentation behaves and maintain an electronic reporting history of testing results.

601006 **Power electronics gas turbine starting solutions 101**

Static frequency converters (SFC) can start large gas turbine-generator sets if the generator is operated as a synchronous motor; this approach eliminates the need for a separate starting device, such as an electric motor, diesel engine, torque converter and associated auxiliary equipment. Static starters also require less maintenance and less mounting space. This session examines static frequency converters and generator excitation systems and how recent advances in technology can be applied in an upgrade project.

301006 **Strategic partnering and collaboration: an executive discussion**

Partnering and collaboration are not new concepts, but they have taken on a new level of importance amid a flood of new tools aimed at helping people work together. So what does collaboration look like today? What makes partnerships pay off? Executives from some of the region's top organizations talk about the challenges and rewards of partnering and how strategic collaboration has affected their bottom line.

301110 **Communicating with project stakeholders: understanding filters and dealing with them**

Learn how to identify your own communication filters, recognize the communication filters of others and develop techniques for addressing them. Managing communication filters helps improve overall communication effectiveness in the project setting.

701406 **Offshore production applications and solutions provided by K-TEK level products**

Over the past 35 years K-TEK Products has positioned itself as a true leader in oil and gas production level measurement, worldwide. K-TEK magnetic level gauges, magnetostrictive transmitters and guided wave radar are now considered the standard for many international oil and gas production companies. These products provide the reliability and accuracy needed in harsh environments.

801606 **Three keys to designing safe, reliable and efficient substations for heavy industrial facilities**

US manufacturing is experiencing a resurgence, thanks in part to an abundance of natural gas that has created new opportunities for many industries, particularly in the oil and gas, petrochemical and steel sectors. As these facilities expand their capacity, they need more reliable substations to safely and dependably meet their power needs for years to come. By looking at the key drivers outlined in this session, you will be able to identify and implement the right substation design to meet your goals and objectives.

Wednesday, March 4 – 10:00 a.m. - 11:30 a.m.

201002 **Chemical, oil and gas industry forum**

The power of integration in the chemical, oil and gas industry

The complexity of process plants is growing, as are the requirements of the electrical, automation, safety and manufacturing operations systems that run them. To better manage this complexity, an increasing number of chemical, oil and gas projects are integrating as many of their systems as possible. We will look at some of the integration options available to the industry, what their benefits are and in what situations they make the most business sense to pursue.

Wednesday, March 4 – 1:00 p.m. - 2:00 p.m.

401107 **Preventive maintenance: increase drive reliability while cutting operating costs**

AC drives are not maintenance-free devices; they need regular maintenance to extend their useful lives. Preventive maintenance consists of regular inspections and component replacements according to a product-specific schedule and tailored to environmental conditions. Preventive maintenance is carried out on site during planned production shutdowns. This proactive service solution maximizes the life, uptime and performance of drive equipment, thus lowering the total cost of ownership.

401207 **Best practices for optimized performance of your System 800xA**

This session explains how to assess the performance of your System 800xA and help you determine proper configuration settings and maintenance practices. Learn how to determine if network settings are properly configured, monitor computer performance items, monitor controller performance, determine if the aspect database is in good health and check domain core functionalities. Monitoring and correcting some of the items covered in this session could help resolve intermittent connectivity issues, accelerate graphic callup times and catch system degradation.

401307 **Implementing a safe and secure safety instrumented system in an integrated environment**

Recent industry events have increased concerns and awareness around the impact of security on the performance of automated systems. Safety Instrumented Systems perceived to be the last line of defense to prevent catastrophic consequences in plant operations are of special interest to plant operators. This workshop cover best practices adopted by automation companies to protect their systems by design, by default from the box and during implementation.

401407 **Spur evolution of your operator interface: it's not all black and white**

Display system design involves more than the background color of the graphics. This session focuses on a display system evaluation from an operating company. Actual displays are evaluated and design changes recommended. Key concepts are covered, including workspace layout (the use of monitors and area of monitors); display system structure (the organization of graphics for enhanced processing and navigation); and display layout and formatting (what objects should look like and how much detail should be provided).

501003 **Lean Simulation 2: the benefits of lean • (NOTE: 3 hour session)**

Learn the basic principles of lean manufacturing/lean construction and how to apply them. Using a combination of hands-on simulation and classroom learning, this session demonstrates how to apply lean tools and concepts, such as standardized work, visual controls, batch-size reduction and pull systems.

601007 **Improve asset life cycle and lower costs through predictive analytics and asset health management**

Asset management strategies leveraging predictive analytics are critical for optimizing the asset life cycle. Retiring experts, aging assets and shrinking budgets are increasing the demand on utilities to get the most out of their systems. Traditional approaches to maintenance and replacement planning are unable to meet these growing demands. This session explores the challenges utilities face in managing their asset fleet and how they can use advanced performance algorithms and predictive analytics to increase reliability and efficiency and save millions in operating and capital expenses.

For more information and to register visit:
www.abb.com/apw2015

Wednesday, March 4 – 1:00 p.m. - 2:00 p.m. (continued)

- 601407 **Review of measurement technology trends to meet tightening EPA emission regulations**
Growing pressure to reduce emissions from major industrial sources is driving instrument companies to measure more components at lower concentrations than ever before. This session studies the latest EPA regulations affecting the oil, gas and petrochemical industry, power utilities, cement plants, and waste incinerators, including monitoring requirements and measuring technology trends.
- 301106 **Project requirements: scope creep is manageable**
Clearly articulated requirements allow the predictable and complete realization of the project scope, a challenging task especially for large projects. Conversely, poorly defined or inadequate up-front requirements can lead to costly rework down the road.
- 701407 **System 800xA version 6 overview and update**
System 800xA's latest release is all about protecting customers against cyber threats, lowering their total cost of ownership and improving their personnel's productivity. Hear about the latest advancements in 800xA and its climb to be the most successful process automation system on the market today. In addition, a panel of experts answers questions on the upgrade process and new capabilities in version 6.
- 801306 **Corrosion: extending the life of your electrical system • (NOTE: 2 hour session) CEU CREDIT**
This session investigates the effects of corrosion on the performance of electrical systems; the science, types and results of corrosion; and methods and techniques to protect electrical system infrastructures.
- 801607 **Staying alert without being alarmed: managing alarm systems for improved operator response**
This session examines alarm management practices, performance assessments and opportunities for improvements. Learn about evaluation methods for alarm data, operational practices, control room environment, alarm design and configuration. This information can be used to assess alarm system performance relative to desired baseline levels and identify areas for improvement. This session presents industry guidelines and standards, as well as typical issues and potential improvements to help meet industry guidelines, improve operator responses and optimize alarms.
- 801804 **System 800xA engineering using ControlBuilder • (NOTE: 2 hour session)**
This 2-hour, hands-on technical training session introduces the 800xA system, basic system architecture and fundamental configuration skills using the ControlBuilder engineering tool.
- 801810 **System 800xA alarm management • (NOTE: 2 hour session)**
This session explores advanced features of alarm management in 800xA, including priority, grouping, shelving, hiding, response and analysis.

Wednesday, March 4 – 2:30 p.m. - 3:30 p.m.

- 401008 **Innovations for a better world: future control room engagement@work**
The automation products and systems of tomorrow will not look like they do today. This session examines what is happening in different domains and how the new technologies can be applied to shape the future of automation. Find out how technologies such as wearables, augmented reality and internet of things can be applied in industry.
- 401108 **Leveraging MySiteCondition to move from time-based maintenance to reliability-centered maintenance**
Operational and maintenance budgets are decreasing, assets are aging and resources are more limited than ever. Knowing the condition of the installed equipment and where to focus operational budgets is key. MySiteCondition is a condition indexing methodology that supports reliability-centered maintenance strategies by assessing the criticality of the equipment, actual site conditions, historical data and safety. It helps evolve switchgear maintenance to better leverage a company's operational budget and resources.
- 401208 **Automation service solutions for the 21st century**
Up to 75% of the automation investment is not providing benefit because of the lack of a comprehensive service approach. Based on the equivalent of 1000 years of recorded service activity, ABB has defined service distribution models that address today's service requirements. This session highlights preventive maintenance, reactive maintenance and optimization (process) maintenance. Today's service requires advanced solutions based on the latest technology, coupled with proven methods to ensure the optimal distribution of service effort.

Wednesday, March 4 – 2:30 p.m. - 3:30 p.m. (continued)

401308 **Human factors and their impact on plant safety**

Automation systems introduced in the manufacturing processes have produced increased safety and productivity during normal operation, but they can also help to keep the plant safe during abnormal conditions. This session discusses some of the capabilities available in a modern automation system and how to apply technology to support decision making and help humans handle abnormal situations safely and effectively.

401408 **New control room design for enhanced operations**

The latest research proves the importance of ergonomic design and indicates how technology can be used to plan state-of-the-art operation centers that increase operator alertness, improve situation awareness and reduce training requirements. Operators are human and humans make mistakes that lead to increased risk to business, environment and personnel. Many of these errors can be avoided by implementing the various concepts and tactics addressed in this session.

601108 **Hybrid energy storage system transforms drilling operations**

Drilling operations face challenges when venturing into isolated locations with rugged terrain and harsh environmental conditions. Off-grid rigs are more susceptible to transients and faults, yet power quality performance remains essential for safe and efficient operations. This session describes an integrated mobile battery energy storage solution for a gas rig that quickly responds to changes in power demand and operating conditions, providing many benefits that reduce the need for added capex equipment while greatly lowering fuel consumption, maintenance costs and site emissions.

301008 **Cyber security: the present state and the future**

Cyber security has become a dominant topic in many industries and continues to grow in importance. Asset owners, system integrators, vendors and government organizations alike are increasing their efforts to address the new challenges. Cyber security has become a topic discussed at all levels of an organization, as well as one of public interest. This session brings together thought leaders to discuss the current state of cyber security and how to effectively address the growing challenges, as well as sharing their visions of how the cyber security landscape will change.

301107 **Project planning: beginning with the end in mind**

Project planning is the heart of project management and occurs continuously throughout the project life cycle. This session focuses on the activities that typically occur during the first few weeks of a project, including identifying all the work, sequencing activities, planning for risk, creating a realistic schedule, obtaining commitment, planning for testing and documentation and scheduling resources and team members.

701308 **S+ Control and I/O**

S+ Control and I/O is a comprehensive suite of standards-based hardware and software that meets the requirements for total plant control. The portfolio includes the SD Series (Symphony DIN) and HR Series (Harmony Rack). The energy efficient SD Series features modular DIN rail packaging; flexible, high-performance, Ethernet-based plant network; intelligent electrical and field device integration; PROFIBUS, HART, IEC61850 (MMS and GOOSE) and Modbus TCP communication protocols; and an integrated turbine control solution.

801010 **Automatic transfer scheme (ATS) via IEC 61850 GOOSE**

An automatic transfer scheme (ATS) assists electric power system control and automation operations. In a main-tie-main bus configuration of two independent sources with a normally open tie breaker, ATS can automatically restore a bus affected by loss of its main source. Automatic retransfer occurs by opening the tie breaker and closing the affected main breaker once the source returns. This session shows how to develop a generic object oriented substation event (GOOSE) ATS scheme; it requires a basic understanding of power system protection philosophy, PCM600 software and the REF615 relay.

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Wednesday, March 4 – 2:30 p.m. - 3:30 p.m. (continued)

701408 **New 800xA networks portfolio: making systems safer, more secure and more reliable**

Industrial control systems depend more and more on Ethernet-based networks. In addition to an increase in use of Ethernet for system infrastructures and mobility, the use of communications protocols such as PROFINET, IEC 61850 and Ethernet/IP, is also growing. ABB has launched its own portfolio of network equipment for 800xA - 800xA networks. This new set of switches and routers for wired and wireless applications can make your system safer, more secure and more reliable.

Wednesday, March 4 – 4:00 p.m. - 5:00 p.m.

401009 **A new paradigm: integration of operations technology with process control**

The process industries, and the chemical, oil and gas industry in particular, have plateaued in process safety and operational performance. A barrier to improvement would seem to be the lack of system integration between machines, men and methods. A breakthrough solution using Ventyx OT and ABB Industrial IT is able to meet the challenge.

401109 **Squeezing maximum benefit from your service provider network with remote access solutions**

Discover how a remote access solution can augment your resources, identify potential issues before they become problems and help you leverage the full potential of your existing service provider network. During the session, process optimization engineers connect over HMI consoles to explain how all these goals can be achieved while keeping your IT department satisfied.

401209 **The benefits of alarm management**

With modern DCS systems, everything gets instrumented and, hence, more and more alarms must be managed and operated. Having too many alarms is a health, safety and environment (HSE) issue and a cost issue, leading to an unhealthy operator environment, unplanned shutdowns and sub-optimal process efficiency. The benefits of alarm management include improved safety and profitability as well as compliance with international standards and government regulations. ABB delivers solutions for the whole alarm management life cycle; for example, ABB's AlarmInsight.

401309 **Implementing cyber security strategies for process control systems**

Industrial control systems are leveraging standard IT infrastructure more than ever and for good reason. Standardization reduces costs, simplifies DCS integration with other systems and offers additional productivity-enhancing concepts such as remote operations and mobility. However, as a result of these trends, cyber security threats are increasing as well. This session explains how to apply best practices when implementing a cyber security solution, resulting in safe, secure operations.

401409 **Mobile technologies to mitigate against human error in procedures**

The science of ergonomics and human factors has well-established models and taxonomies of human error that have been applied successfully to the process industries over the years. These models have resulted in mitigation strategies for human performance, in areas such as competence, instructions and operating culture. This session introduces the established error taxonomies, highlighting some of the problematic error types. It examines current and emergent technologies, their implications for job design and their possible impact on human performance.

301009 **Bore no more: how to present your ideas with power, passion and professionalism**

It doesn't matter how mind-blowing your ideas are if you can't capture your audience's attention. Let's face it: if your presenting style is filled with nervous tics, "um's" and "uh's," poor eye contact, awkward gestures and a less-than-commanding stance, nobody is going to be focused on your content. In this interactive session, learn how to command the room (even before you speak) and present your ideas in a way that conveys your confidence and competence.

701108 **Hazardous location LED lighting: has it lived up to expectations?**

An expert panel discusses the development and promise of LED lighting for hazardous locations. LED is compared to traditional methods of hazardous location lighting. The scotopic versus photopic debate raises the question of whether or not LED has met the claims made five years ago and, if not, when it will meet those claims.

801011 **Easy to implement IEC 61850**

This hands-on session focuses on the use of IEC 61850. The IEC 61850 protocol supports a method to directly exchange data between two or more intelligent electronic devices (IEDs). The concept is based on sending a multicast over the Ethernet. Whoever needs the information, detects the telegram by its source address, reads the telegram and deals with it. In this session's exercise a load can be fed from two sources; only one source can be connected at a given time.

Wednesday, March 4 – 4:00 p.m. - 5:00 p.m. (continued)

801211 **Panel Builder 800: programming basics for version 6**

In this hands-on session, program the Panel Builder 800 to communicate with AC800M using a memory membrane system (MMS), and learn the basics of building graphics using standard libraries and configuration to set up communication with AC800M. Find out how data can be exchanged using the built-in drivers.

801609 **Understanding calibration and field verification of flow instruments**

This session clearly defines calibration, configuration and verification when referring to field instruments. It then reviews many of the field verification options for flow instrumentation and explains how to identify the best method.

Thursday, March 5 – 10:00 a.m. - 11:30 a.m.

201003 **Chemical, oil and gas industry forum**

Leading flawless execution in the chemical, oil and gas industry

Flawless execution is a common goal among chemical, oil and gas companies, given multi-million dollar projects in high-risk environments, grueling production schedules and increasing public scrutiny. Experts from Afterburner, former fighter pilots who live and breathe flawless execution every day, teach you techniques to lead your teams and execute your mission critical business objectives.

Thursday, March 5 – 1:00 p.m. - 2:00 p.m.

401010 **CoServ Gas: SCADA in the cloud**

In 2014, ABB was awarded a contract to provide a supervisory control and data acquisition (SCADA) solution to CoServ Gas that included the supply and installation of ABB total flow RTUs and access to data from a SCADA Advantage solution hosted in the cloud. This revolutionary approach to SCADA allows new or smaller users to have all the benefits of a powerful SCADA solution, such as SCADA Advantage, without taking on the responsibility to own, operate or maintain the host infrastructure themselves.

401110 **Cyber securing your site throughout its life cycle**

Establishing cyber security for a control system is not a one-time implementation but an ongoing part of maintenance. We'll explore best practices and standards, and services available both for those who are self-sufficient and those requiring more assistance. We'll cover baseline security controls which should be deployed, such as patch management, anti-virus, hardening, removable media, host firewalls, log review, and system backup, testing, and recovery and how they are related to each other. Identify the gaps in your life cycle maintenance plan and discover how to address them.

401210 **Applying variable frequency drives in the process industries**

Throughout the process industries, production reliability and machine uptime are tied together with plant maintenance requirements, driving customer behavior related to variable speed drive products. Identifying problem applications and providing solutions with drives can address some of the challenges that customers face. Understanding the customer's needs relative to reliability, productivity and maintenance time allows the proper application of drives, helps to reduce the total cost of ownership and improves plant performance.

401310 **The truth about the separation of safety and process automation**

Industry commonly implements process control and safety using different and independent systems, and the method is established in safety standards as a best engineering practice. However, users perceive benefits from the integration of safety and control. An expert panel reviews safety standards and identifies implementation schemes to address the need for integration and provide a better response to abnormal conditions in the plant, while still meeting safety standards. The session also addresses concerns about the cyber security of integrated systems.

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Founded in 1975, Microsoft (Nasdaq "MSFT") is the worldwide leader in software, services, devices and solutions that help people and businesses realize their full potential.

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Thursday, March 5 – 1:00 p.m. - 2:00 p.m. (continued)

401410 **Improve process safety with state-based control**

Generally, process safety automation is considered the responsibility of a specialized safety system and that remains true for safety integrity level (SIL) safety automation requirements. But what if basic automation of the process were constructed to significantly improve maintenance of the process within acceptable operating limits so that it does not reach the conditions that trigger a response from the safety system? Opportunities for improvement range from ensuring consistent and mistake-proof operations to removing the need to expose operators to potential process and physical hazards.

501004 **Discrete machine safety: reducing the risk of injury • (NOTE: 2 hour session)**

Lean safety is about being efficient, better and more cost effective. Real changes in technology and safety culture not only improve the safety performance of the workforce, but increase the efficiency and quality of systems that are currently in place on machines. Value-added functions enhance user satisfaction, reduce installation waste and lower net application costs. With common processes and easy-to-maintain and use safety systems, results are immediate. Discover how to begin the process of lean cultural safety.

301010 **Understanding the science of change**

Personal mastery, creative tension and emotional resilience can not only help us endure change, but even embrace and lead others through it. Change can be empowering if we learn to understand our reactions to it and utilize the tension it brings to propel ourselves towards a different future. This session shows how individuals, as well as organizations, have seized the opportunities presented by change.

301108 **ABB extends main automation contractor capability with EPC/SI partners**

Today's market for capable automation resources becomes more challenging by the week. With an aging workforce and constant movement in technology, finding consistent and experienced resources is a problem. ABB is solving this problem by extending its own main automation contractor (MAC) capabilities beyond just ABB systems to include full-service engineering capabilities along with independent systems integration (SI), by engaging experienced partners with resources.

701410 **Enhanced multiphase flow measurement by Vega Isokinetic Sampling**

Thanks to a partnership with TEA Sistemi, ABB provides Vega Isokinetic Sampling (VIS), a high-performing yet compact meter, able to successfully manage the most challenging multiphase stream conditions. ABB VIS is the ideal solution for monitoring the flow rates of produced oil, gas and water close to the wellhead. VIS provides the same accuracy as conventional test separators in a product-sized gamma-free device. ABB's VIS is the new generation of multiphase flow meter (MPFM) tailored for wet gas applications and able to provide outstanding accuracy in the most challenging regions.

701109 **Engineered prefabricated solutions to enhance job site productivity**

Compressed project schedules and skilled labor shortages are causing electrical contractors to rethink their traditional methods of installation for greater productivity on the job site. The use of prefabricated assemblies provides a significant opportunity to not only save installation labor but also streamline the entire process of getting material to the job site. Through collaboration with their manufacturer partners, contractors can identify electrical rough-in assemblies that can be prefabricated and drop-shipped directly to the job site to meet the project schedule.

801013 **Easy to implement IEC 61850**

This hands-on session focuses on the use of IEC 61850. The IEC 61850 protocol supports a method to directly exchange data between two or more intelligent electronic devices (IEDs). The concept is based on sending a multicast over the Ethernet. Whoever needs the information, detects the telegram by its source address, reads the telegram and deals with it. In this session's exercise a load can be fed from two sources; only one source can be connected at a given time.

801212 **Compact Control Builder: programming basics for AC800M**

This session introduces programming for the Compact Control Builder for AC800M and the use of process libraries and communication using access variables.

801410 **Introduction to protection and control**

Hear about the role of relays for the protection and control of power systems, including relay classifications, relay applications, basic protection principles and relaying philosophy. Learn how to identify the Institute of Electrical and Electronics Engineers (IEEE) device numbers for various types of protective functions and about IEEE and International Electrotechnical Commission (IEC) symbols on circuit diagrams.

Thursday, March 5 – 1:00 p.m. - 2:00 p.m. (continued)

- 801806 **System 800xA human/machine interface with PG2 graphics • (NOTE: 2 hour session)**
In this 2-hour hands-on technical training session, learn about the 800xA console and PG2 graphics, including the operator workplace, graphic elements, faceplates and graphic displays.
- 801812 **System 800xA alarm management • (NOTE: 2 hour session)**
This session explores advanced features of alarm management in 800xA, including priority, grouping, shelving, hiding, response and analysis.

Thursday, March 5 – 2:30 p.m. - 3:30 p.m.

- 401111 **Remote monitoring for drives: what can it do for you?**
Concerned about the high cost of downtime? Consider remote monitoring to reduce service time and accelerate fault recovery. Learn about the ways that a drive monitor can reduce downtime on your drive-dependent applications. Discover the monetary and time savings from remote diagnostics compared to dispatching an engineer on site for troubleshooting. Witness a real-time demonstration of a drive monitor connected to a remotely located drive.
- 401211 **Implementing and using new smart measurement technologies to improve plant performance**
The real reason to install smart instruments is to get more information about the process and the device itself. There is little doubt that technological improvements, such as fieldbuses, have offered significant savings in wiring, but enhanced diagnostics of the sensor, electronics and process also communicate more information about the devices. Smart instruments are embedded systems and use a hardware-architecture strategy to increase measurement accuracy under varying operating conditions.
- 401311 **Technology advances in process safety: the value of mobility in performing safety proof tests**
Instrumentation manufacturers provide key reliability statistics for their products. The reliability of instruments and field devices is vital for meeting process safety protection goals. New advances in field mobility enable workers to perform periodic validation tests using ruggedized devices to ensure the accuracy and reliability of instrumentation. Those test results can be recorded electronically and tabulated over time, becoming a true validation of the reliability of critical instruments.
- 301011 **Big data is not better data: business analytics as a storytelling tool**
Business analytics are all around us, and the abundance of data does not necessarily result in better results. Business analytics can be used to convey a concept or idea and should be used as a tool for storytelling. Relying on just the numbers won't necessarily add up to success. Whether entry level, mid-level managers or senior leadership, all employees need to sell their concept, projecting initiative and self-worth, and too much data can often become a distraction instead of providing clarity.
- 301109 **Collaborative risk management: the mutual benefits from jointly managing risks**
Customer supply chain staff often transfers risks to the primary supplier, but that approach may not always be in the best interest of large projects. Instead, partnering agreements may reduce total project risks. This session looks into possible areas of collaboration between customer and supplier to lower the overall project risk and project cost by apportioning certain civil works, transportation, installation, interfacing and other risks.
- 701211 **Transformers for oil and gas and other challenging environments**
Environments such as those encountered in the oil and gas industries pose challenging transformer reliability and safety concerns. During this session, the most recent possibilities for transformer safety and environmental hardening are reviewed.
- 801014 **Automatic transfer scheme (ATS) via IEC 61850 GOOSE**
An automatic transfer scheme (ATS) assists electric power system control and automation operations. In a main-tie-main bus configuration of two independent sources with a normally open tie breaker, ATS can automatically restore a bus affected by loss of its main source. Automatic retransfer occurs by opening the tie breaker and closing the affected main breaker once the source returns. This session shows how to develop a generic object oriented substation event (GOOSE) ATS scheme; it requires a basic understanding of power system protection philosophy, PCM600 software and the REF615 relay.
- 801108 **Using ABB AC500 PLC and CP600 HMI via Ethernet connections • (NOTE: 2 hour session)**
This hands-on laboratory lets you create your own basic program using an ABB AC500 programmable logic controller (PLC) to communicate with the CP600 human/machine interface (HMI) over Ethernet connections. The HMI screens represent a simple motor control circuit. You use a remote software tool to control and explore the HMI project. All of these tools are part of the Automation Builder software suite.

Thursday, March 5 – 4:00 p.m. - 5:00 p.m.

- 401012 **A robust process FT-NIR spectrometer with small footprint and extended maintenance interval**
Control and optimization of refinery process units, from distillation, conversion and upgrading units through to final product blending and release, has always been a major concern and objective for refinery operations, critical as it is for effective and economic operation. Process optical spectroscopy analyzers are attractive tools to measure stream quality. This session explores recent technical innovations within process spectroscopy, including simpler more robust process FT-NIR analyzers with minimum footprint and utility requirements.
- 401112 **How standardization in chemical, oil and gas deliveries reduces life cycle costs**
In response to lower margins and increasing cost pressures, oil and gas companies are focusing on reducing life cycle costs. Standard solutions not only reduce EPC costs, but also give significant cost savings over the life of a facility. The benefits of tailor-made solutions may be enjoyable in the first years, but result in higher costs in upgrade and update activities during operation. A life cycle perspective on the costs of a facility suggests that the long-term savings associated with standardization outweigh the benefits of customization.
- 401212 **Compressor performance and condition monitoring using high frequency electrical data**
Asset conditioning and performance (ACP) is a joint industry project between ABB, Statoil and Gasco. The project collects electrical data from the drive system to find opportunities to enhance B31 performance and conditioning monitoring for gas compressor drive systems. A shaft power calculation has been verified with an inaccuracy of less than 1 % for a compressor drive system. A prototype has been installed at Statoil's gas export plant, Kollsnes. Analysis of the data collected show promising results for condition monitoring of the compressor drive motor.
- 401312 **Compliance to functional safety standard ISA 84**
The process industries are facing increasing demands to demonstrate that their operating risks to people, environment and the workplace are reduced to acceptable levels. This session highlights a life cycle management approach that supports compliance with the ISA 84 safety standard, industry good engineering practices and the delivery of sustainable, profitable and safe manufacturing operations. The session also addresses corporate responsibility, the development of a safe culture and the basis of safe operation and competency within the organization.
- 401412 **800xA simulator: current and future trends in life cycle simulators**
More and more customers worldwide use life cycle simulators, such as ABB's 800xA simulator with a dynamic process model. The demand is growing for full-scope simulators that include new important system additions to the control systems, such as integrated safety, power management, electrical integration and APC, since the benefits of virtual commissioning and operator training are well known. Additionally, virtualization and cloud computing make it possible to have multiple systems available on demand. Life cycle simulators reflect these new trends.
- 601312 **High fidelity, optical Information to drive adoption of IEC 61850 and enable the digital substation**
IEC 61850 promises to improve the reliability and resiliency of the 21st century digital substation, but the standard is limited by the accuracy and stability of the ITs that provide the input signal. Unlike early optical sensors that have proven to be unreliable, intensity modulated optical sensors provide a field stable solution to this input signal problem. This session presents data from on-going trials and demonstrates how intensity modulated optical sensors can be used to simplify the merging unit architecture and deliver the full promise of 61850 to utilities and their customers.
- 601412 **Understanding OSHA final rule and mitigation methods to minimize arc flash hazard**
Five to ten arc flash explosions occur every day. Some of these explosions can be fatal. OSHA issued a Final Rule on July 10, 2014, revising the standards for electric power systems and encompassing risk analysis, minimum approach distance, personal protective equipment and other concerns. The Final Rule imposed several compliance dates as early as January 1, 2015. This session covers highlights of the new law and arc flash mitigation methods that can minimize possible harm.

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Each month, ABB's Gulf Coast oil and gas e-bulletin delivers expert insight on current topics, technologies and products for operators in the oil and gas industry. Drawing on more than 50 years of experience in the upstream industry, each issue covers the latest innovations in areas such as operator effectiveness, production efficiency, maintenance strategies, safety and other relevant industry topics. Browse through past issues and sign up for your own free subscription at us.oilandgasinsights.com

Thursday, March 5 – 4:00 p.m. - 5:00 p.m. (continued)

301012 **Bore no more: how to design a compelling story to drive change and innovation**

Communicating clearly and concisely is important for every speaker, but it's positively do-or-die for the technical presenter. One of the most effective ways for technical professionals to transform their sessions is to tell a compelling story. According to the Harvard Business Review, powerful speakers know how to combine data and narrative to make an impact, ignite change and inspire innovation. This session shares concrete tips and tools to help you become a more compelling, concise, clear and effective speaker.

701012 **Power electronics control upgrades 101: back to the future**

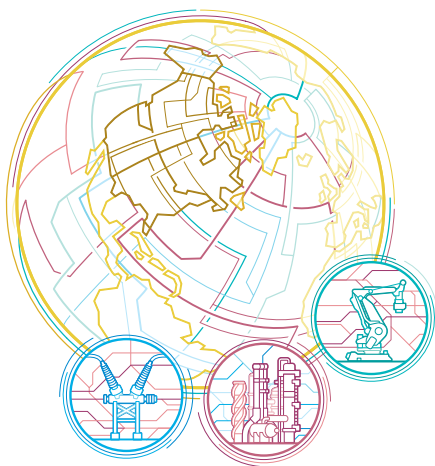
Make the most of your investment and extend the life of your existing power electronics (excitation and rectifier systems). ABB is pushing the limits and thinking outside the box with customized control upgrades.

701412 **Implementing a secure wireless strategy in a process control environment**

Many traditional systems using physically isolated, proprietary wired networks are evolving towards integrating open standard, internet protocol (IP) based architectures built on wireless networks. Like all networks, wireless IP process control networks come with potential vulnerability to cyber attacks. These cyber security challenges can be overcome by using a layered protection approach and best practices, including tools and techniques developed by the enterprise security community to protect security conscious networks, such as government agencies and financial institutions.

801015 **Easy to implement IEC 61850**

This hands-on session focuses on the use of IEC 61850. The IEC 61850 protocol supports a method to directly exchange data between two or more intelligent electronic devices (IEDs). The concept is based on sending a multicast over the Ethernet. Whoever needs the information, detects the telegram by its source address, reads the telegram and deals with it. In this session's exercise a load can be fed from two sources; only one source can be connected at a given time.



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