ISA

Wilmington Delaware
Section

The Sensor
September 2006

In this Issue

Upcoming Events

Sept 26   Section Meeting at ACE
Oct 17-19 ISA Expo in Houston
Oct 24   Section Meeting at ACE
Nov 16   WISA show at Holiday Inn Select

September 26, 2006
**Section meeting
Safety Lifecycle Practices
Chris O'Brien of exida
At the ACE office in Newark**
5:30 PM

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Safety Lifecycle Practices – Results from an End User Survey

Speaker Chris O'Brien of exida

As more and more companies become aware of and look at actively implementing the new functional safety standards important questions are being raised. These questions relate to grandfathering of existing systems, timing of implementation and availability of resources. Realistic answers to these questions are critical to the development and implementation of an achievable plan. exida has worked with end users over the last 6 months to try and answer these and other questions. The presentation will review the results of these surveys.

Wilmington ISA Show

Thursday November 16, 2006
Holiday Inn Select on Naaman's Road

Vendor Exhibits

ISA Training

and Friends

President's Message

By Steve Prettyman

As hard as it is to believe, we are already in the third month of the 2006-2007 Wilmington ISA calendar year. This means that since the year end picnic in June at Our Lady of Grace in Newark, we have had our annual July break from section activities, our annual Blue Rocks game in August, and we are poised to attend our first regularly scheduled section meeting at ACE headquarters in Newark on September 26 at 5:30 pm. This month's speaker, Chris O'Brien was rescheduled to September from our May section meeting due to some scheduling difficulties. I look forward to seeing everyone attend the first section meeting of my second term as WISA President.

It is with great pride and the knowledge gained in my first term as ISA Wilmington section President that I humbly accept the Executive Committee's selection and endorsement for a second term. I cannot overstate the confidence, experience, and skill gained in my first term. I truly believe that one cannot be prepared for the Presidency without serving a preparatory year in office witnessing the expertise of those that have previously held the office.

I would be remiss if I were to neglect to honor Nick Sands as my mentor. Nick and I attended both the Spring and Fall 2005 ISA Leadership Conferences. These experiences helped me to understand the fundamentals of the ISA organization, the ISA Delegation, the District II, the Management Division, and the Wilmington Section. Most importantly, these experiences offered me the complete view regarding how the section contributes to the ISA and how the ISA supports the section. It really has been a fantastic learning experience that I highly recommend to everyone reading this message.

I was, regrettably, unable to attend the Spring 2006 ISA Leadership Conference; however, I will be attending the Fall 2006 Leadership Conference and I look forward to sharing another tremendously powerful ISA experience with Nick and the rest of the ISA Leadership in Houston on October 14-20. Every ISA Leadership event is unique in many ways and yet each upholds the ISA standards while delivering quality training, industry awareness, and networking potential. I anticipate another great experience this Fall and extend the invitation to all interested ISA members. If you choose to attend, you will not regret it.

There have been some changes in the WISA Executive Committee related to the Program Chair position. Debbie Lien has stepped down to travel to Taiwan and Eric Waugh has stepped up to replace her. Please help me welcome Eric to the Executive Committee and extend a warm thank you for his contribution. You, too, can make a difference in the ISA by supporting the Wilmington Section through volunteering your time. The contribution need not be an arduous commitment, rather a simple contribution of time and energy at your discretion.

If you read my monthly message you may recognize a recurring theme; the Wilmington section needs your help. Volunteer today, you will be glad you did.

Saved by the Bell
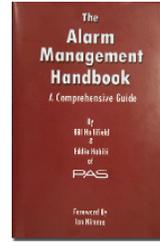
The Alarm Management Handbook
by Bill Hollifield and Eddie Habibi
BBBB (Buy)
Reviewed by Nick Sands

Alarm Management continues to be a hot topic and a gap in the body of knowledge for automation professionals. Kudos to Bill Hollifield and Eddie Habibi of PAS for filling that gap by self-publishing The Alarm Management Handbook. Habibi, who holds an engineering degree and an MBA, is founder and CEO of PAS, with previous experience at Schlumberger and Honeywell. Hollifield, who has a BS in Mechanical Engineering from Louisiana Tech and an MBA from the University of Houston, has significant alarm management experience, including part of his 27 years with Union Carbide and Dow, and his last 4 years or so with PAS. For much of that time, Hollifield has been a significant contributor on the SP18 committee working on an alarm management standard, along with this reviewer.

The handbook begins with a quick summary of how to develop an effective alarm system in seven steps, which summarizes many of the practices discussed later in the book. This is one of a few places in the book where the privilege of self-publishing becomes self-evident. There is a chapter on the history of alarm systems and how the problems of today developed with the advent of microprocessor based control systems. Hollifield also tries to address the justification for improving alarm system performance, which relies mostly on the correlation and conviction that improving the alarm system improves safety and operation. There is no magic bullet solution to justification.

The authors highlight the chapter on what is an alarm as the most important in the book. The working definition for alarm is given as a mechanism for informing an operator of an abnormal process condition for which an operator action is required. As stressed throughout this chapter and the book, alarms are not for things that are nice to know, but things the operator needs to know. The alarm philosophy takes the definition of alarm and builds structure around it; the practices to set, configure, and display alarms and measure performance. The topics of the alarm philosophy are further explored in the later chapters, starting with the display of alarms and issues of priorities, colors and tones.

One key step in alarm management is benchmarking, or assessing the performance of the alarm system. There are several metrics that can be used, including alarms per day, alarms by frequency, number of alarm floods and many more. These metrics should be used to monitor the performance of the alarm system. To improve performance, a key technique is rationalization of the alarms.

Standards & Practices: SP75 Control Valve Standards (Part II)

By Nick Sands

The purpose of the SP-75 committee is all ISA standards work related to valves, including the work of previous control valve committees ISA-SP4, ISA-SP39, and ISA-SP59. SP75 maintains a liaison with ANSI Committee B16 or B16/SCO and serves as the United States Technical Advisory Group (USTAG) for the International Electromechanical Commission (IEC) control valve activity now vested in Technical Committee 65, Subcommittee 65B, Working Group 9, Final Control Elements IEC/TC65/SC65B/WG9.Standards writing shall be carried out by the various subcommittees and generally not by the main committee.

SP75's next meeting is scheduled for Tuesday, 16 October 2006, in Houston, Texas, in conjunction with the President's Fall Meeting.

Some of the many standard and practices for control valves include:

ANSI/ISA-75.19.01-2001 Hydrostatic Testing of Control Valves establishes requirements and definitions for standard hydrostatic shell testing of control valves to prove structural integrity and leak-tightness of the pressure retaining parts, including closure parts such as the bonnet-to-body joint, but excluding packings, bellows, or other moving seals and packing leak-off connections. The standard applies to control valves having bodies, bonnets, cover plates, and bottom flanges made of carbon steel, low and high alloy stainless steel, nickel-base alloy, and cast or ductile iron.

ISA-RP75.21-1989 (R1996) Process Data Presentation for Control Valves describes a technique for communication of process data and other requirements between process system designer or the user and the valve supplier to facilitate the selection of control valve actuators and accessories. The technique includes such features as the process data envelope, process schematic, piping configuration and process data worksheet.

ISA-RP75.23-1995 Considerations for Evaluating Control Valve Cavitation provides state-of-the-art information about control valve cavitation. Includes information on cavitation parameters, methods of evaluating cavitation through testing, and guidelines for selection of valves. Definitions of terms in this document are intended for general understanding; more rigorous definitions are found in the references.

ANSI/ISA-75.25.01-2000 Test Procedure for Control Valve Response Measurement from Step Inputs defines the testing and the reporting of step response of control valves that are used in throttling closed loop control applications, as well as methods and criteria for performing response tests and evaluating test results for three alternative environments: bench testing, laboratory testing, and in-process testing. This standard does not define the acceptable control valve performance for process control nor does it restrict the selection of control valves for any application.

Chris O'Brien of exida

Chris O'Brien has 19 years experience in the design, manufacturing and marketing of process automation, reserve power systems and safety related equipment. He is currently the Director of Business Development with exida. In this role he focuses on supporting new and existing customers with their implementation of the IEC 61508 and S84 / IEC 61511 functional safety standards.

He was formerly Vice President of the Power Systems Business Unit of C&D Technologies, a business the specialized in the design and implementation of high reliability back up power systems. Prior to that he was with Moore Products / Siemens Energy and Automation where he held several positions including General Manager of the Instrumentation Division. Chris has been awarded 4 patents, including a patent for the industries first safety rated pressure transmitter. He has a Bachelors of Mechanical Engineering from Villanova University.

SP75 continued

ANSI/ISA-TR75.25.02-2000 Control Valve Response Measurement from Step Inputs describes the characteristic response of a control valve to step input signal changes. It considers the factors that affect this response, the impact of the response on the quality of process control, and the appropriate control valve specifications. Identifies and defines four regions of control valve response to step input changes of varying sizes. Provides guidance that can be used to relate the control valve performance to process control.

ANSI/ISA-75.26.01 ANSI/ISA-75.26.01-2006, Control Valve Diagnostic Data Acquisition and Reporting this document applies to all pneumatically operated, automated rotary or reciprocating, on/off, or modulating valves. It also includes automation components (i.e. positioners, transducers, and solenoids) as applicable. It provides a methodology for standardizing the acquisition and reporting of data used in assessing valve condition. The document includes the type of data to be acquired, the number of measurements to be recorded and their resolution, units of measure, nomenclature, computer file storage format, graphical presentation, and other reporting formats. It does not address interpretation of data or diagnosis of valve condition.

Saved by the Bell cont..

Rationalization is a review of each potential alarm against the definition of alarm and typically a set of grids, to develop a well documented, consistently prioritized alarm. PAS claims ownership of a focused method for this process discussed in a separate chapter.

The final chapter addresses the more specific topics of real time alarm management including alarm shelving and state based alarming. Hollifield shares his view on the classic lightbox alarm panel as well as several specific alarm types, including gas detections and safety systems. Common problems, like nuisance alarms and duplicate alarms are addressed. There is a brief section on management of change and a discussion of the future of alarm systems. As a bonus there is an outline of an alarm philosophy in an appendix.

Hollifield and Habbi have performed a service to the automation industry by publishing the first book in many years to address the area of alarm management, and the most complete work on the subject to date. As with any self-published book, the reader must be cautious to separate the facts form the authors' opinions, which at times are so strong that reading some sections is like being yelled at by a drill instructor. Still this book brings together most of the best approaches published in many articles over the last two decades, reinforced by the authors' own experiences. I recommend it to every automation professional as a buy (BBBB). Though you may have trouble finding a copy for now, it is available from Amazon.com for $69.

Wilmington ISA Show
Free Seminars

Fieldbus
10:00am—11:00am

Safety Systems & Interlocks
11:30am—12:30pm

Cyber Security
2:00pm—3:00pm

Wireless & RFID
3:30pm—4:30pm

Free Admission & Parking

ISA - Wilmington Section
P O Box 9245
Newark, DE 19714-9254

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