Director’s Message

By John Murray, P.E.

Welcome to YOUR Pulp & Paper Industry Division’s latest Newsletter, which, you may have noticed, is being published on a rather erratic schedule. My term as your Director ends at the end of 2001, and I will try to use this time to finish strong.

Brad Carlberg has agreed to be Director-Elect and will assume the Director’s duties in January 2002. Brad is Program Coordinator for PUPID for ISA 2001 and has done an excellent job. Houston will be the best Conference/Exhibit for the Pulp & Paper Division in many years with seven sessions—and this is all thanks to Brad and the presenters who have already committed to be in Houston. By putting the same energy into his Director’s duties I expect to see our Division grow like it never has before. However, one person cannot do everything alone and I would ask that those of you who want to see our industry grow, and who have a passion for process control and instrumentation, let Brad or me know that you are willing to help. ISA is YOUR Society and PUPID is YOUR Division. We need your help to survive and grow as a division. Please give this some serious thought. I know that several corporations have placed travel restrictions on their employees, especially to conferences and exhibits, but if you are a committee member, they may be more willing to allow travel to these events.

Technical Presentations at ISA 2001

As you may (or may not) know, ISA 2001 will be held at the George R. Brown Convention Center in Houston on Monday, 10 September through Thursday, 13 September. With seven sessions by PUPID on Monday, Tuesday and Wednesday and an all-day “Division-based” format, PUPID’s technical papers are shaping up to make it one of the better divisions. The following people have committed to present papers for PUPID sessions: Jim Swartz of Metso, Jeff Merman of Automatic Controls Company, and Bill Gough of Universal Dynamics Ltd.; Stephen Prout of Alabama River Pulp, Denny of GE-Turbines, David Brown of Triconex, and Brad Carlberg; Leoncio Estevez-Reyes of Weyerhaeuser Corporate R&D and Michel Ruel and George Buckbee of TOP Control; Adam Melton of Pacific Simulation in Moscow, ID and Matt McGarry and Raluca Constinescu of AMEC (formerly Simons); Henry Schindler of Honeywell HiSpec (SACDA); and Phil Bartells of SimTech in a process simulation shootout; a panel with Richard Galera of SanPeople; Marcos Taccolini of InduSoft; Lanny Metcalf of Schneider Automation; and Janie West of Wonderware; a tutorial by John Rudd of NuSoft Technologies (formerly of Pavilion) in Austin, TX; and the traditional “Instrument Persons Roundtable” where your questions and topics will be discussed by YOU. Whether or not you have been to an ISA Fall Event before, I urge you to find out what new technology is available by attending ISA 2001 and find out what other people are doing with that technology by attending the technical conference. Go to the detailed technical program at toobigtomiss.com for more information as it is updated and finalized.

Honors & Awards

Marty Schweers, our Honors & Awards Committee Chairman, reports that no one seems to want our money! He continues to seek nominations for the following:

PUPID Man of the Year ($1000 honorarium which the recipient customarily redirects to a
Best Paper ($200 honorarium)
A limited number of student scholarships (each $1000 annually) (See “Scholarships” on page 4)
You can begin the process of seeing that an appropriate PUPID member or young student receives a reward they deserve by NOMINATING them for one of the above. For more details contact Marty Schweers at marty.schweers@halliburton.com.

Websites & List Servers
With one website for PUPID operating through ISA’s homepage (www.isa.org, select Division, select View List of Technical Divisions, select Pulp & Paper Industry Division), and another independently operated by our Webmaster (www.isa.org/~PUPID), we clearly need to update and improve our web-based communications. Attention also has to be given to the rarely used e-mail lists we created a year or so ago. I believe that progress will have been made by the time this Newsletter reaches you, so track us down on www.isa.org/~PUPID. Rick Van Fleet tried to start the PUPID “Discussion Forum” List Server back in 1997 without much support and let it go after receiving email returns asking to remove a lot of names from the list. Let’s make a concerted effort to get it back alive again. I don’t know anybody who knows everything about everything and cannot use a forum to bounce ideas around.

ISA PUPID / TAPPI PCE&I Joint Symposium
ISA PUPID had two sessions (out of the eighteen total sessions there) at the TAPPI PCE&I/ISA PUPID Joint Conference in San Antonio this 25-29 March 2001; if you were not able to attend, plan for next year!

And finally, PUPID needs YOU
If you would like to see PUPID’s Newsletter published more frequently, and you think its content could be improved and extended, why not consider becoming its Editor? Contact me and we can discuss the next issue and the one after that . . . Or, if money interests you more than a career in publishing, why not consider the rewarding position of PUPID Treasurer? Help determine how we can grow our revenues and spend them for the benefit of our 1300+ members. Remember PUPID is your Division, so make the best of it!

SEE YOU IN HOUSTON!
Sincerely,
John Murray, P.E.
Pulp & Paper Division Director

Calendar of Events
ISA President’s Fall Meeting
8–9 September 2001
George R. Brown Convention Center
Houston, Texas
Come meet your leaders & get involved!
ISA 2001
10–13 September 2001
George R. Brown Convention Center
Houston, Texas
Too Big to Miss! Conference registration is FREE to ISA Members! Come see the seven PUPID technical sessions.
TAPPI Paper Summit
3–6 March 2002
Georgia World Congress Center
Atlanta, Georgia
45th Annual ISA Power Industry (POWID) Conference
2–7 July 2002
San Diego, California
Come present a paper at one of the two Joint PUPID sessions!
Pulp & Paper Process Control Trends

Brad Carlberg, BSC Engineering, Daphne, AL

Last March I had the pleasure and honor of moderating a discussion panel at the TAPPI PCE&I/ISA PUPID Joint Symposium held in San Antonio, Texas. The panel was comprised of Corporate Process Control Managers from five major pulp & paper companies: Tom Bermel of Weyerhaeuser, Karel Cerny of Georgia-Pacific, Ian Journeaux of Stora Enso, Chris Rogers of Boise-Cascade, and Mike Rothaupt of (formerly of) Kimberly-Clark. Ole Fadum of Fadum Enterprises rounded out the panel sharing his expertise in ERP/MES. Needless to say, the room was “standing room only.”

In developing the panel, I wanted to “pick the brains” of the panel with questions like: “how do you see the spread of open systems in control systems and HMI’s?”; “Do you think PID is being replaced by Model predictive, multiple-input-multiple-output controllers?”; “Do you see Foundation Fieldbus coming to your mills any time soon and is it the panacea that it has been built up to be?”; “will OPC, XML and Visual Basic replace the traditional DCS?”

Mike Rothaupt began and brought a round of laughter from the audience when he said (referring to open-system architecture in control systems) that “the good news is it’s an open system and the bad news is it’s an open system”. With the increased flexibility of open systems, we now must often redesign the control system from the ground up being careful not to overlook some of the DCS features (often hidden) that we took for granted that need to be built into an open system. No doubt, if you’re like me, you can relate to that sentiment, and have your own open systems story (or nightmare).

Karel Cerny stressed three main points. He would rather have standards better suited to the continuous process industries (e.g.: allowing “online changes”). He would like to see a single asset management tool that all vendors can “plug into.” There are too many proprietary communication standards. There needs to be bridges to HSE for high-density discrete I/O and there need to be more and better diagnostic tools.

Tom Bermel opened with the statement “management wants to do more, faster, and with less money” (don’t we all!). He went on to say that he believes strongly in remote hosting of control and optimization applications and, in fact, Weyerhaeuser has just allocated money for a remote application for 17 mills with 2 presently running.

Chris Rogers stressed the “bottom line” and said he will look for process control to improve ROI and is open to sharing savings with suppliers. Ian Journeaux asked where are our “core competencies,” how do we, as process control engineers, make a significant contribution to the benefit of the end product for the customer? He also mentioned that he hates to see process control and IT lumped together as so often happens.

Ole Fadum summed up by mentioning the need to integrate controls on the plant floor with the entire manufacturing process utilizing order tracking and delivery, ERP/MES/B2B, etc.

At the end of it all, I came away with a challenge from the panel members (and I’m challenging all of you now) to “be all that you can be” as a Process Control Engineer and move up to a new level away from simply being a “DCS/PLC configurer and part-time IT technician”; but, instead, become adept at using the “Process Control Engineer’s Toolbox” of advanced control software proliferating the market these days.

To find out more about the panel, read Ole Fadum’s article in his Spring 2001 Process Control News. Contact Ole at fadum@compuserve.com.
Mentor Program

By Brad Carlberg

The Pulp & Paper Industry Division has 23 members that have belonged to ISA for 40 years or better and the first five joined ISA over 50 years ago.

Horace Thompson, Thompson Equipment Co
Mr. John R. Lavigne, Consultant & Tech Writer
Mr. Robert S. Saltzman, Saltzman & Associates
Mr. Donald B. Scrivens
Gunnar Wennerberg, Measurex Corp
W. C. Morrison, Brown & Morrison
Lyman F. Gilbert, Sr., President Gilco Engineering Inc
Mr. Walter A. Harris, Industrial Training Consultant
Mr. Jim T. Lawrence
William K. Hile, CEO W K Hile Co Inc
Mr. Ralph K. Johnson, Senior Application Engineer Retired
Mr. Robert S. Dodds
Mr. Donald C. Trask, Stone Container Corp
Mr. R. L. Stoughton, Retired
John M. Lavoie, L Robt Kimball & Associates
Mr. Robert H. Zietske
Mr. Robert M. Green, President, Green Associates
Herman L. Paul, Jr.
Merle H. Whisler, P H Glatfelter Co
Mr. Richard J. Reeves, President, CAN-AM Instruments Ltd
Mr. Al G. Webb, Senior Control Systems Engineer
Mr. John W. Weeks, Retired—Raytheon Engrs & Constructors
Mr. J. C. White, James C White Co Inc

I will never forget reading Mr. Lavigne’s book “Instrumentation Applications in the Pulp & Paper Industry” when I just graduated college and knew “virtually nothing” about instrumentation but DID know that I wanted to become a Process Control Engineer in a pulp mill. I consider Mr. Lavigne’s book one of my technical “bibles”.

I was also lucky enough to meet and work with Walter Harris in 1990 when I worked for H.A. Simons Ltd. in Vancouver, Canada. Walter, I will always be indebted to you for your encouragement; I still have the “Handbook of Measurement and Control” you gave me.

I was also lucky enough to work for John Weeks in Birmingham before he retired. I regularly see Jim Lawrence at ISA President’s Meetings. Thank you all for paving a road for me to follow in PUPID.

If you have a testimonial like this, email it to brad.carlberg@bsc-engineering.com and I’ll get it into the next Logger.

If you recognize a name from this list; count yourself lucky and, if they were a mentor to you, thank them.

You can find out more about the ISA Mentor Program by contacting Dana Dunkley at ddunkley@isa.org. I encourage you all to do so.

Is Your Process Control LAN Secure?

Process Control Security Issues
Brad Carlberg
BSC Engineering

Joe Weiss, the EIS Program Manager at EPRI in Palo Alto, California, asked this probing, thought-provoking question at the second technical session at the TAPPI PCE&I/ISA PUPID San Antonio last March. How would you answer him?

“I will never forget reading Mr. Lavigne’s book “Instrumentation Applications in the Pulp & Paper Industry” when I just graduated college and knew “virtually nothing” about instrumentation but DID know that I wanted to become a Process Control Engineer in a pulp mill. I consider Mr. Lavigne’s book one of my technical “bibles”.

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You can find out more about the ISA Mentor Program by contacting Dana Dunkley at ddunkley@isa.org. I encourage you all to do so.

ISA PUPID Scholarships

Let’s give something back like we used to do!

For my 2002–2003 tenure, I have put $2000 into the PUPID budget for scholarships to students in a pulp & paper program.

If you’ve got a favorite co-op or summer student, start “planting the seeds” to urge her/him to apply.

We’ll have a “call for papers” in the Fall to award the scholarship in the Spring of 2002. Contact Mike Waller or Kaichang Li for more info. (See page 12).

Joe stressed that we shouldn’t ASSUME we’re safe from hackers out there. He is working very hard to spread this message. The EPRI EIS members are comprised of the major public utilities and oil companies in North America and Europe. Joe says that the major control system vendors need to join up and assure that their systems (the ones we all use) are secure.

You can meet and talk with Joe at ISA 2001 in Houston or email him at joeweiss@epri.com
ISA 2001 Technical Conference for the Pulp and Paper Division

Monday, 10 September 2001

ISA031 Tuning, Process Control, and Problem Solving (Paper Session)
Time: 10:15 a.m.–11:45 a.m.
Developer: Mike Cantor, P.E.
Fransen Engineering Ltd.

How to choose the proper tuning method and the proper tuning parameters for tuning a PID controller. This session will demonstrate that even if the process equipment is identical, the proper tuning can and often will likely be different. Ziegler-Nichols-Ultimate Gain (closed loop), Cohen-Kuhn reaction curve (open loop), Lambda, and several others will be discussed. The session will discuss the aspects of the process that must be understood, as well as how to collect information. Then, it will examine controller tuning approaches and explain how to choose a tuning method and tuning constants.

What is a healthy valve? How to determine, while the process is running, if the valve performs properly (from a control point of view): without stopping the production, without sophisticated equipment, in minutes, not hours! This session will give you a sequence of tests in manual mode to determine: hysteresis, process gain, stiction, asymmetry. How to manage technology well and properly measure whether the technology that should help is working. At what point does production bring the most profits? The session will explain three types of metrics (reliability, utilization, and variability) that can help sort through the mass of data you have at your computer and data acquisition systems and how to find the useful information using examples of how they are used in a pulp mill.

Choosing Controller Tuning: One Size Does NOT Fit All
George Buckbee
Top Controls Inc.

Triangulation Solves the Process Control Performance Puzzle
Leoncio Estevez-Reyes
Weyerhaeuser Co.

Valve Health Certificate
Michel Ruel
Top Controls Inc.

ISA033 Consistency Control (Paper Session)
Time: 1:00 p.m.–2:30 p.m.
Developer: Rick Meeker, P.E.
Process Control Solutions, Inc.

Papermaking is still an art of fiber, water, and chemistry. The session will describe the characteristics of available consistency measurement technologies discussing the proper application of these new technology consistency meters to give engineers, technicians, and designers guidelines for design and maintenance of consistency meters. The session will also describe the application of an advanced predictive-adaptive process controller on main steam header pressure, save all consistency, and paper brightness control at a TMP paper mill demonstrating the advantages that paper makers can achieve with advanced regulatory process control.

Advanced Predictive Adaptive Control of Steam Header Pressure, Saveall
Barry Dusold
Universal Dynamics Technologies Inc.

Consistency, and Real Brightness in a TMP Newsprint Mill
Jim LeBlanc
Ponderay Newsprint Company

Proper Application of New Technology Consistency Meters
Jeff Merriman
Automatic Controls Company

Total Consistency
Dr. James L. Swartz
Neles Automation

ISA032 Practical Applications in the Pulp Mill (Paper Session)
Time: 2:45 p.m.–4:15 p.m.
Developer: Brad S. Carilberg, P.E.
BSC Engineering

This session will discuss four separate pulp mill applications: 1) the turbine control upgrade performed on a mill power house turbine-generating system and generator excitation control system in a single digital control system that allows the mill to survive the loss of utility tie line, better manage utility costs, and completely automate startup, loading, and synchronizing of dual generators; 2) the installation of a triple-modular, redundant control system that integrates turbine governor controls and generator excitation control system; 2) the installation of a triple-modular, redundant control system that integrates turbine governor controls and generator excitation control system in a single digital control system that allows the mill to survive the loss of utility tie line, better manage utility costs, and completely automate startup, loading, and synchronizing of dual generators; 3) the automation of the recovery boiler sootblowers being controlled by redundant PLCs and monitored from the DCS; and 4) will review the problems associated with measuring chip bin level using radar and a novel new nuclear technology.

Automated Recovery Boiler Sootblowing Control System
Barbara G. Haley
Floyd I. Lawrence
Ford, Bacon, and Davis
Brad S. Carilberg
BSC Engineering

Chip Bin Level Measurement
Jim Rodgers
Ohmni Technologies
Stephen Prout
Alabama River Pulp

Installation of an Integrated Turbine-Generator Control System for a Pulp Mill
Dave Brown
Triconex Corporation
Mark Weaver
Universal Dynamics Ltd.

Tuesday, 11 September 2001

ISA030 Instrument Person’s Roundtable (Panel Session)
Time: 10:15 a.m.–11:45 a.m.
Developer: John Murray, P.E.
MEAD Corporation

Open discussion of instrumentation and process control in the pulp and paper industry.

ISA146 Poster Presentations
Time: 10:15 a.m.–1:30 p.m.

Achieving High ROI Through Control Training and Optimization
George Blackbee
Top Controls Inc.

Consistently Controlling Consistency
George Blackbee
Top Controls Inc.

ISA034 Tuning, Process Control, and Problem Solving (Paper Session)
Time: 1:00 p.m.–2:30 p.m.
Developer: Matt McGarry
AMEC Technologies

This session will discuss four separate pulp and paper mill applications utilizing process simulation.

Benefits of Dynamic Simulation in a Project Life Cycle
Henry Schindler
Honeywell Hi-Spec Solutions

Development of a Combination Boiler Simulator using General Purpose Simulation Tools
Joseph S. Gauthier
Aegis Technologies Group Inc.

B. C. Strand
Pacific Simulation

MPC Control of High Consistency Reject Refiners
Philip S. Bartells
SIMTECH Services Inc.

On the Adaptive Control of Lime Kiln Temperature Profile
Raluca F. Constantinescu
AMEC Technologies Inc.

ISA010 Adaptive Control Technologies Tutorial (Neural Networks) (Tutorial Session)
Time: 2:45 p.m.–4:15 p.m.
Developer: John B. Rudd, P.E.
NuSoft Technologies
Adaptive control technologies represent a class of techniques that are modeled after the way the human brain learns, processes information and executes. The most common areas in process control consist of Expert Systems, Fuzzy Logic Systems, Neural Network Systems, Empirical Modeling Systems, Principal Component (Factor Analysis) Systems, and combinations of these.

This tutorial will briefly define and compare these systems. Then, an in-depth look will be made of the Neural Network Systems. The focus will cover the importance of data, the necessity of properly pre-processing that data and how to build robust models with that data. Some very practical tips will be offered by the author on how to take some marginal models and enhance their performance. Also presented will be guidelines to help determine when the data available is insufficient, or simply the wrong data.

**ISA035 Using Active Server Pages, Intelligent Serial Devices, HTML, SOAP, WM, XSL, FTP, OPC, and ActiveX, and Internet/Intranet Technologies to Create Web-Based HMI’s**

**Developer:** Brad Carlberg, P.E.  
**BSC Engineering**

Web technologies provide new opportunities to implement Human Machine Interfaces (HMI) applications using new technologies that leverage high-speed communication to industrial hardware to view real-time plant/production data over a plant intranet. This future communication architecture will provide a bridge between current proprietary systems to an open environment based on Ethernet and Web technology. The evolution of Web-based HMI has allowed real-time information from automation systems to be accessible to anyone in the corporation and offer interoperability using a flexible, open standard giving us new ways to access and deliver data in industrial automation.

**How Serial Devices can be Part of the Information System**

Richard Galera  
Alan Webber  
**San People Inc.**

**Using Internet Technologies to Create Web-Based HMI**

Marcos Taccolini  
**InduSoft**

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**Far East Corner**

*Bock Teik "Bob" Lee, Honeywell*

The region lost a bit of its market flamboyance with the Indonesian Sinar Mas Group debacle and the usually indomitable Bob Hasan now behind bars. Spending has also been muted with many Asian economies still flailing. China, which has been the fastest growing market for paper, now faces a lack of foreign investment funds, especially from Indonesia, like Hasan’s Indah Kiat business. Regionally listed industry giant, April Group, is going into receivership.

Daunting as the times may be, there are still some new entrants into the business. Enter MyPlant.com, a.k.a. a metamorphosis of Honeywell Industrial Automation into the realm of e-business. MyPlant.com made its first appearance in the regional pulp & paper scene at the Asian Paper 2000 show and stole it; from thereon, they have never looked back. Amidst the dour gloom of the current market situation, this new e-business takes on an added sheen as the industry grovels for new hopes and prospects, and best yet, most of its services are free!

Six hundred new members were registered at the Asian Paper show alone and MyPlant.com now boasts over 20,000 members globally with over 4,000 in the Asia Pacific. Already touted as the industrial portal with the most comprehensive industry resources, and recently lauded in BusinessWeek Top 25 e-Biz businesses, the website is indeed rich in content that covers topics ranging from technical information, to business news, and new technologies. It is uncanny to hear that many plant professionals have latched on to the website here in Asia, even as B2B hiccups in the Western world. In all fairness, many of the services being used are of the free nature, but slowly, these are leading to gradual productivity gains in the business operations of these companies and MyPlant.com could well be the catalyst to lead the once-powerful Asian pulp & paper juggernaut back into resurgence.

You can email Bob at boblee@honeywell.com.

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- Fax: (805) 644-5796
- Mail: ISA 2001, P.O. Box 3561  
  Durham, NC 27702 USA
- Call: (919) 549-8411
λ-Based Control Loop Tuning

by Ian Journeaux, Stora Enso N.A.

Here is a brief outline of λ tuning. There are two basic steps:

1. Process Model Identification
2. Lambda Tuning
   - 1st order process with deadtime
   - integrating process (i.e. level control)

Process Model Identification
(First-Order with Dead-Time)

Many processes in the pulp and paper industry can be approximated by a 1st order process with deadtime. If we perform an open-loop bump test, the response can be characterized as follows:

Nomenclature:

\[ y = \text{controlled variable} \]
\[ u = \text{manipulated variable} \]
\[ k_p = \text{process gain} \]
\[ \tau_p = \text{process time constant} \]
\[ \tau_d = \text{process deadtime} \]
\[ \lambda = \text{desired closed loop time constant} \]
\[ k_c = \text{controller proportional gain} \]
\[ PB = \text{proportional band (100/kc)} \]
\[ \tau_i = \text{integral time (1/reset rate)} \]
\[ \tau_d = \text{derivative time} \]

The process parameters can be estimated using the following equations:

\[ k_p = \frac{\Delta y}{\Delta u} \]
\[ \tau_p = 1.5(T_2 - T_1) \]
\[ \tau_d = T_2 - \tau_p \]

Lambda Tuning

Choose the desired closed-loop time constant, \( \lambda \) (typically 2 to 3 times the process time constant).

\[ k_c = \frac{2\tau_p + \tau_d}{2k_p(\lambda + \tau_d)} \]
\[ \tau_i = \frac{\tau_p + \tau_d}{2} \]
\[ \tau_d = \frac{\tau_p \tau_d}{2\tau_p + \tau_d} \]

Level Control Tuning

\[ |k_e| \geq \frac{2}{e} \frac{\text{Typical Load Change} \, (\%)}{\text{Allowable Error} \, (\%)} \]
\[ \tau_i \geq \frac{4}{|k_e|} \frac{\text{Tank Volume (gal)}}{\text{Maximum Flow (gpm)}} \]

Rules of Thumb

- Integral time should not be smaller than the process time constant.
- Level control oscillating? Remove nearly all integral action.
- Poll time should be less than one-tenth the process time constant, \( tp \).
- Filter time constant should be less than one fifth the process time constant, \( tp \).
- Closed-loop time constant is usually greater than the process time constant, \( tp \).
- For cascaded loops: Tune the inner loop first. Closed-loop time constant of the outer loop should be at least 5 times that of the inner loop.

You can reach Ian Journeaux at the TAPPI Process Control listserv at TAPPIProcessControl@yahoogroups.com.
Process optimization, more than loop tuning!

Michel Ruel, P.E., TOP Control Inc.

Steps to optimize a process:
1. Understand the process
2. Work in cooperation with the operators, explain your work
3. A loop is rarely alone, most loops must work in harmony. When you optimize a process, you are the conductor; you must decide which loops will be slow, which will be fast, when you need tight control.
4. There is no single method to tune loops
   • load rejection or SP tracking?
   • tight control or sluggish control?
   • model-based methods or frequency analysis?
   • batch or continuous process?
5. Simple PID control should be your first choice. If not effective enough, use a more complex control strategy:
   • cascade,
   • feedforward,
   • override,
   • major/minor,
   • adaptive,
6. Check your process before tuning
   • Hysteresis, backlash
   • Stiction
   • Process gain
   • Linearity
   • Varying model
   • Asymmetry
   • Noise, hidden cycling
   • Interaction
7. Tuning is a compromise between:
   • Speed and Robustness
   • Performance and Stability
8. Use modern tools to analyze the process (point 6), to select performance criterion (point 7) and predict:
   • valve wear,
   • performance,
   • robustness,
   • speed of response,
   • overshoot
9. To improve performances:
   • a small filter will reduce useless valve movements
   • some loops will benefit from derivative; if used it will improve stability, increase performance and improve robustness
   • often, a characterizer should be used to improve linearity
10. Tune fast loops first, then slower loops;
   • the loops not being tuned should be in manual mode;
   • each time a loop is tuned, leave that loop in auto when tuning the next one
   • the response time between interacting loops should be different (factor of 3 to 5)
END: Verify your work and if possible, ask the operator to produce large disturbances. Write a short report. The loop should not be re-tuned until the process is modified or the equipment is replaced or worn out.
You can reach Michel Ruel at mruel@topcontrol.com.
Quickies

ISA Pulp & Paper Technical Discussion Forum

Anybody (not necessarily an ISA or PUPID member) can subscribe to the PUPID Pulp & Paper Technical Discussion Forum. To subscribe, go to the PUPID homepage at http://www.isa.org/~pupid/, select “Pulp & Paper Technical Discussion Forum” in the pick box, click “Go”, and enter you email address and a password.

ISA Email address for ALL Members

Any ISA member can register for a free email address and online mailbox. If you set it up, your ISA email address will be your-name@member.ISA.org. To register, go to http://www.isa.org/membership/benies/, and follow the registration instructions.

Links to Related Websites

ISA Pulp & Paper Website.................................................................http://www.isa.org/~pupid/
Pulp & Paper Research Institute of Canada........................................http://www.isapo.ca/
TAPPI.................................................................http://www.tappi.org/
American Forest and Paper Association...........................................http://www.afandpa.org/
National Society of Professional Engineers........................................http://www.nspe.org/
Swedish Royal Institute of Technology................................................http://www.pmt.kth.se
.................................................................http://www.hut.fi/English/
Helsinki University of Technology..................................................http://www.hut.fi/English/
Australian Pulp & Paper Institute....................................................http://www.monash.edu.au
ISA Standards Committees Listserver............................................http://www.isa.org/shellcgi/lyris.pl?site=isa&page=topic&topic=standards+committees&text_mode=0&lang=english

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ISA—The Instrumentation, Systems, and Automation Society

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the Power Industries Division would have been interested in how a enterprising B&B owner could design and have built, a nearly self sufficient home away from home for vacationers. And the Water and Wastewater Division guys would have liked to see how an ecologically sound sewer system as well as an environmentally friendly compost system, could be designed and installed in a part of the country where the hard rock and the permafrost made installation a more than difficult task. And actually the Powid folks would have marveled at the heating capabilities of the centrally located fireplace that only consumed about 50 pounds of wood on the coldest of winter days, and yet supplied heat to the entire building (about 6000 square feet or so) for about twenty four hours, through an ingenious method of ducting and reheat. It was quite a system. Now, maybe the control system, which was pretty elementary, wouldn’t have excited the ACOS guys, but surely the Marketing and Sales guys would have been delighted with the location as one of those great places to hold a seminar on sales. The views of the lake and the mountains were wonderful. And just like Texas, the stars at night are big and bright.

L.M. “Dutch” Keen, P.E.
Section/Division Liaison
ISA Houston Section

PUPID Luncheon Meeting At ISA 2001

We will have a PUPID Luncheon Meeting at NOON on Tuesday, 11 September at Balcony D, Level 2 of the George R. Brown Convention Center at ISA 2001. The luncheon is for all who are interested in Pulp & Paper whether you are a current (or future) PUPID member. If you would like to meet the PUPID officers and ISA Staff, find out what the future holds for PUPID, or just to gripe about something you DON’T like about PUPID (or the world in general); come and have a sandwich and a coke. We will have a “short” PUPID business meeting but will be primarily getting acquainted. Thirty lunches will be provided free of charge to ISA PUPID members and then to non-members on a “first come - first served” basis until they’re all gone; so get there early!

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