No April Fool Jokes this time – Have a wonderful and blessed spring month!

There is still time to Register for Training

You may be aware of an engineer, a designer, a technician, a sales person, a maintenance person, an operations employee, or someone who needs training and education to answer some questions that are integral to our field of automation, instrumentation and control.

What is the best way to measure level in a liquid storage tank? What is the difference between flashing and cavitation in a control valve? Do you need derivative control for all loops? Where do you mount a pressure transmitter measuring steam pressure? How do you establish the upper and lower range values for a process variable measurement? When is the best time to use open loop tuning for a loop? What are the advantages of programmable automation controllers? Which are the best features of field bus systems?

These are just a few samples of the topics that will be covered in the ISA Birmingham Section 49th Annual “Fundamentals of Industrial Automation, Instrumentation, and Control” training course to be held on May 7 - 9, 2019, at the offices of KBR Engineering in Birmingham. You may know someone who can benefit from this three day instructional course and improve their value on the job. Also, this course is an excellent way to obtain the continuing education credits or professional development hours needed for certification or license renewals. This is also a great class for anyone who is preparing for the Control Systems Professional Engineer exam.
For more information and to register, go online to:
https://www.isa.org/events-conferences/events-calendar/event-details/?productId=62875972

Contact Gerald Wilbanks at (205) 566-9801 for additional details.

ISA Birmingham Leaders 2018 – 2019

Visit the ISA Birmingham web site:
www.isa.org/birmingham

- President: Jim Key – Southern Company Services (jimkey@southernco.com)
- Vice President: Meg Moore – W.G. Yates Company (mmoore@wgyates.com)
- Treasurer: Patrick Joseph – Southern Company Services (pvjoseph@southernco.com)
- Secretary: John Cover – A&E Engineering (cover.john5@gmail.com)
- Past President: Frank Flow – Flexim Inc. (fnflow@yahoo.com)
- Program Chair : Mark Isbell – W. G. Yates Company (misbell@wgyates.com)
- Education Chair – Gerald Wilbanks – DES (gwilbankspe@charter.net)
- Membership Chair: Catherine Andrews – Hile of Alabama (candrews@hilealabama.com)
- Honors & Awards Chair: Gerald Wilbanks – DES (gwilbankspe@charter.net)
- Web Master: Jimmie Johnson – Southern Company Services (jimjohns@southernco.com)
- Elizabeth Clarkin – Southern Company Services (epclarki@southernco.com)
- Marketing Chair: Chris Sorensen – Southern Company Services (cssorens@southernco.com)
- Publications Chair: David Hyche – KBR (david_hyche@kbr.com)
- Standards & Practices Chair: John Bryant – Southern Company Services (jabryant@southernco.com)
- Historian: Skip Wells – Southern Company Services (skipandalice@att.net)
- Student Section Liaison: Yao Wang – Southern Company Services (ywang@southernco.com)
- Section Division Liaison : Charles Morris (c.morris7711@gmail.com)
- ECOB Liaison: Cliff Fleming – Control Equipment Company (cleming@eadsdistribution.com)
- President Advisory Team and Special Assignment:
  Delane Ponder – Southern Company Services (X2ponder@southernco.com)
  Grady Andrews – Hile Controls of Alabama (gandrews@hilealabama.com)
  Cliff Fleming – Control Equipment Company (cleming@eadsdistribution.com)
  John Edge – Baluff Inc. (john4auburn@gmail.com)
  Kiumars Bahri – Southern Company Services (kbahri@aol.com)
Mark Your Calendar:

- **49th Annual training class: “Fundamentals of Industrial Automation, Instrumentation, and Control”**
  May 7 – 9, 2019 (8:00 AM until 4:00 PM)
  Location: KBR Engineering in Birmingham
  Information and registration information:
  
  [https://www.isa.org/events-conferences/events-calendar/event-details/?productId=62875972](https://www.isa.org/events-conferences/events-calendar/event-details/?productId=62875972)

- **ISA Birmingham Section Honors & Awards Dinner**
  When: Tuesday – May 14, 2019
  Where: Red Lobster Restaurant – Highway 31 in Vestavia
  Why: To recognize the awardees, welcome new officers, and host the former ISA Birmingham Section Presidents.
  Cost: Section pays for dinner for all awardees, member spouses, and former presidents.

Anyone with suggestions as to program topics and presentations, should contact Mark Isbell at [misbell@wgyates.com](mailto:misbell@wgyates.com), with ideas and suggestions.
Technical Brain Teaser

A control valve is to be sized for the following conditions:

Liquid flow, 50 GPM, specific gravity = .81, inlet pressure of 240 psig, with a pressure drop of 10 psi. The required flow coefficient for the valve will most nearly be:

a. 10.4  
b. 14.2  
c. 22    
d. 35.5
Answer

In this case, you are only given the required flow rate, the specific gravity of the fluid, and the pressure drop across the valve. Since you do not know the vapor pressure of the liquid, there is not opportunity to check for flashing or cavitation for this situation. The pressure recovery factor, FL, can be approximated for the valve by selecting a valve body style (globe, ball, or butterfly), but allowable pressure drop cannot be calculated without knowing the vapor pressure or the name of the liquid.

Therefore, the basic control valve sizing equation may be employed to calculate the required flow coefficient for the valve. The selected valve should have this capacity at approximately 2/3 open, based on the flow coefficients shown in the valve table.

\[
C_v = Q \sqrt{\frac{G_s}{\Delta P}} \quad \Delta P_{ALLOW} = F_L^2 (P_1 - F_F P_v)
\]

\[
C_v = 50 \sqrt{\frac{81}{10}} \quad F_F = .98 - .28 \sqrt{\frac{P_v}{P_c}}
\]

\[
C_v = 14.23
\]

Answer is B 14.2