Benefits of Credentialling to Individuals

There are various ways for an individual working in the automation, instrumentation and control field to move forward in their professional career development. A person must be expanding their technical competence and knowledge in their job performance and assuming more responsibilities. Also, a key element in this development is improvement of leadership skills and people skills in working with others. Each person is a separate entity of capability, skill sets, knowledge, and background that enables them to set themselves apart from others in the same industry. This requires time, study, hard work, dedication, experience, and application of skills to the tasks assigned.

One way to have this progression recognized is to qualify for and obtain a “credential” that attests to the level of professional ability of the person. This recognition will serve to notify others of the achievement and the professional abilities of the individual. These credentials are obtained by satisfying a set of criteria that includes education, experience, professional references, and testing. Just as a high school diploma, a trade school degree, or a college degree serves to establish some base skill levels, a credential from a third party source will serve as a differentiator from other individuals in the same line of work.

The International Society of Automation (ISA) has certification programs as part of the service to the members and to the automation field. These are proven and tested methods to document your abilities and skill level to demonstrate total capability to employers and other companies. ISA conducts the entire process and grants the certifications to individuals working in the automation field.
The ISA Certifications are:

- **Certified Automation Professional (CAP)**
- **Certified Control System Technician (CCST)**

**Certification programs** are a way to enhance credibility, self-image, and encourage life-long learning and professional development. ISA's certification programs benefit employers and automation professionals by promoting development and recognition for individuals, and by providing measurable hiring and promotion qualifications for managers. Certification recognizes and documents your experience, knowledge, and education - and provides an objective, third-party assessment of your skills.

As an individual, getting certified:

- Enhances professional credibility
- Extends knowledge and skills, preparing you for more job responsibilities
- Serves as portable proof of ability
- Encourages ethical conduct
- Enriches self-image and reputation among peers
- Improves career opportunities-promotion, pay increases, job portability
- Encourages life-long learning and professional development

ISA has published books and materials that cover the topics in the exams and also conducts training classes for those preparing for the testing process.

In addition, ISA is the supporting technical organization for the **Control Systems Professional Engineer License**. This is a legal license to practice in a specific field of engineering and is awarded by various jurisdictions or states based on laws and statutes that state the requirements for the recognition. The benefits for becoming licensed and registered in a jurisdiction as a Control Systems PE are the same as listed above for certification, plus the legal requirement to work in as a consultant in that state.

The basic standard requirements as listed by the National Council of Examiners for Engineers and Surveyors (NCEES) are as follows:

- Graduation from an ABET accredited Engineering School
- Minimum of 4 years’ experience in the field.
- Successful completion of the Fundamentals of Engineering Exam
• Successful completion of the Principles and Practices (CSE) Exam

Various states have some variation in these requirements, but most do adhere to the NCEES model law as shown above. ISA provides resources and personnel for the Control Systems PE Exam Committee, which develops test items, coordinates the exam materials, and publishes the Study Guide for those taking the exam. Also, ISA publishes many books and reference items that are key to the preparation for the exam.

Training classes are offered for preparation for the testing process and include instructor led three day face to face offerings, and an online instructor assisted class. The online class consists of 21 one hour long segments that are viewed over 12 weeks on a schedule that meets the needs of the participants.

Check this out at www.isa.org/training-and-certifications/isa-certification/

Mark Your Calendar:

• September 2019 - ISA Birmingham Section Kick-Off meeting on September 10, 2019 at location to be announced.

Anyone with suggestions as to program topics and presentations, should contact Mark Isbell at misbell@wgyates.com, with ideas and suggestions.
ISA Birmingham Leaders 2018 – 2019

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

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Matt’s -

WORD FOR THE DAY:

‘Ratiocination’
\rat-eō-sə-ˈnā-shən, rash-eō \n(noun)

1. The process of logical thinking or reasoning.

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Technical Brain Teaser

Which of the following flow measurement devices does not require a square root extraction of the output signal to get a linear response to the flow rate?

a. Orifice plate and dp cell  
b. Magnetic flow meter  
c. Pitot tube  
d. Venturi meter
The orifice plate and differential pressure transmitter measures the pressure drop across the orifice and the volumetric flow rate is inferred by the square root of the pressure drop. All flow measurement devices which depend on pressure differential will have to use a square root extractor to linearize the signal to represent a linear variation in flow rate. Therefore, the Pitot Tube and Venturi Meter will have to employ a square root extractor, for a linear representation of the volumetric flow rate. However, the Magnetic Flow Meter measures the velocity of the flow stream of a conductive fluid using Faraday’s Law, so the volumetric flow measurement signal will be linear.

Answer is B Magnetic Flow Meter