

Professional Resources

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Civil Engineering Program Emphasizes Hands-on Materials Testing

The two-year diploma program in **Civil Engineering Technology (CVT)** at SAIT Polytechnic (Calgary, Alberta, Canada) is intensive and rich with opportunities to learn about building materials firsthand. Since the 1970s, the school has made significant investments in lab equipment so students can experiment with, and understand the property differences between the many materials used in construction, especially metals and concrete. Last fall, SAIT added a 600 kN Super L materials tester from Tinius Olsen so students can perform strength and tensile testing of small steel and cast iron samples. The new machine complements two other Tinius Olsen machines, one a compression machine used for concrete testing and the other a horizontally-oriented torsion tester.

The goal of the lab programs at SAIT is to help students see that every material and sample has its breaking point. Such knowledge is critical in establishing specifications and adhering to them when designing, engineering, and building structures. “Our students are really amazed by the way that a destructive testing machine can make short work of a steel rod,” notes Steve Paul, who heads the CVT laboratory at SAIT’s School of Construction. “They watch as metal is stretched until it pulls apart with an audible pop. There is no such thing as indestructible.”

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eLearning Program Teaches AC Motor Controls

Most AC motors are started through a standardized control system designed to protect the motor, the circuit, and operating personnel. “**AC Motor Controls**” eLearning program from New Standard Institute, available as CD, download, or web-based, focuses on ladder diagrams, wiring, and troubleshooting techniques for the most common motor used in the industry, the AC induction motor.

Topics covered in this training include:

- Components of a motor control circuit
- Common motor circuits
- Wiring diagrams vs. ladder diagrams
- Variations on the motor control circuit
- Time delay and latching relays
- Power circuits
- Wiring a motor starter

For more information: New Standard Institute, 84 Broad Street, Milford, CT 06460; tel: 203/783-1582; e-mail: nsi@newstandardinstitute.com; web: www.newstandardinstitute.com. ■