

EDUCATIONAL GAS MEASUREMENT LAB ADDITION

CLIENT:

BridgeValley Community
& Technical College

LOCATION:

South Charleston, WV

INDUSTRY:

Education, Natural Gas

SYSTEMS:

Engineering
Fabrication



THE BACKGROUND

BridgeValley Community and Technical College was formed in August 2014 with the merger of Bridgmont and Kanawha Valley Community and Technical Colleges and has campuses in Montgomery and South Charleston.

BridgeValley Community & Technical College's Instrumentation, Measurement and Control Technology program of study with a Natural Gas Concentration allows students to develop skills for the installation, maintenance, calibration and troubleshooting of systems used to measure and control the flow, level, temperature and pressure in automated industrial processes in the chemical, oil and gas industry.

Courses combine technical theory, use of state of the art equipment, and hands-on experience necessary to work in industrial instrumentation fields across the state, and throughout the country, upstream and downstream oil and gas as

well as electrical & instrumentation programming and chemical operations.

Students learn how to monitor natural gas for impurities using gas quality monitoring equipment. The in-depth curriculum covers components of natural gas and how if unprocessed, affect the quality of the natural gas; purpose, design, and standards associated with natural gas sampling as well as various sampling methods and mechanisms of sample conditioning and control.

THEIR CHALLENGE

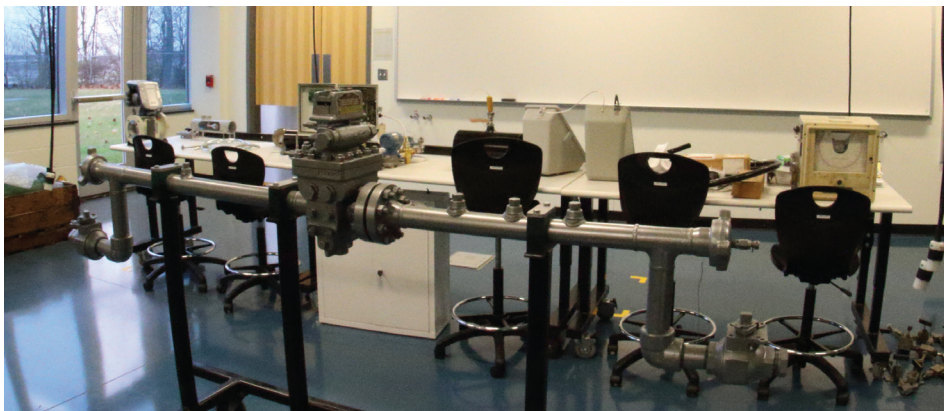
The Advanced Technology Center added the Natural Gas Program to address the industry shortage of skilled technicians for the growing natural gas industry. Classes became available in the fall semester of 2017, and training opportunities are enhanced as the natural gas lab continues to grow.

In addition to rotary meters, turbine meters, and other technology donations, Natural Gas Program Director, Ken Haynes wanted to provide students with a working measurement skid exactly as they would find in the field enabling students to learn pressure, temperature, and flow measurement and control as well as training for maintenance of the skid system.

Mr. Haynes requested the support of Valtronics to provide a variety of measurement and natural gas sampling and conditioning components for a comprehensive lab that will allow students to have experience of real-world technology upon graduation.

PROJECT PROFILE

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OUR SOLUTION

Through a long relationship between Valtronics and Ken Haynes, and after multiple visits from Valtronics' Sales Engineer, Glenn Rinehart, to speak to Natural Gas class students at BridgeValley, Mr. Haynes requested Valtronics' support in designing and providing a measurement solution for the Natural Gas lab.

Valtronics Solutions supplied a 4" Ultrasonic Meter Tube with updated electronics and low pressure transducers and a 2" x 1" control valve. The equipment is used in GASM – 211 Natural Gas Quality Measurement I 3 class of BridgeValley's Natural Gas Technology Associates Degree program.

BridgeValley's Charleston West Virginia measurement lab currently uses a 2" Daniel Senior Orifice Meter Tube, a Mustang® Sample Conditioning System which includes a Mustang® P53® Sample Conditioning System close coupled to a Pony® Heated Probe Enclosure and a Mustang® Modular Analyzer Distribution Panel supplied by Valtronics in 2015. The system utilizes the Mustang Sampling patented power connection through a heat trace tube bundle.

Students are able to install and retract orifice plates, inspect orifice

plates, install and terminate heat trace tubing, monitor measurement through a variety of systems with the implementation of pressurized air which imitates natural gas pressure, flow, and temperature.

Glenn Rinehart, Sales Engineer for Valtronics Solutions stated, "The evolution of classroom technology has changed immensely and it is with great pride that I have been able to be a part of this forward momentum at BridgeValley Community & Technical College. Valtronics Solutions has graciously provided many pieces of equipment for student hands-on training and I have been lucky enough to provide instructional presentations to the students on gas sampling, sample system design and operations as requested. I will also be providing hands-on instruction on Gas Chromatograph (GC) operation and maintenance. This amazing opportunity came due to the recent donation of a Daniel 570 GC by a local gas company and the commitment from Valtronics to refurbish and provide updates to dated electronics for the GC."

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