

CUSTOMER CONNECTION

AUGUST, 2006

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NGC IMPROVES LANDFILL GAS PRODUCTION

South-Tex Treaters has been successfully treating landfill gas produced from landfills in Kansas City, Kansas and Fort



Smith, Arkansas for eight years. The treatment process includes physical solvent CO2 removal, H2S removal, and gas blending. The South-Tex Treaters treating process also includes a propane injection system, 600 horsepower compressor, and system controls. To learn more about South-Tex Treaters's unique LFG treating process or how they can assist in conventional gas treatment, contact them in Odessa, Texas at 432-563-2766.

Landfill gas, also known as LFG, must undergo a physical solvent treatment process in order to be sold as a high BTU end



Installed NGC at South-Tex Treaters

product. To effectively measure and provide a continuous update of the gas heating value, Doug Lloyd, South-Tex Treaters Plant Superintendent in Shawnee, Kansas, called on ABB Totalflow to install the

newly released **NGC 8200 Natural Gas Chromatograph** on-line analysis instrument. South-Tex selected the Totalflow NGC because of its flexibility, ease of use, high precision, and low cost; a unique combination for on-line gas chromatographs. It is used to provide an analysis of



Installed NGC at South-Tex Treaters

the LFG and the LFG-propane blended stream. Jarrod Doonan, South-Tex Treaters Plant Superintendent in Fort Smith, has found the NGC to be a great investment for their landfill project. In his own words, he sees the NGC as being..."**Nearly maintenance free, the NGC has eliminated big headaches by proving accurate and consistent day in and day out. Moreover, the unit allows us to communicate readings to our plant interface in order to run our process more effectively. By and large one of the most reliable**

instruments we have at the plant. I can assure you that the NGC will be installed at all our future plants to come."

If you have a need to monitor the quality of your pipeline gas or determine the amount of energy delivered at a gas sales point, then give ABB Totalflow a call in Bartlesville, OK. The NGC 8200 **PERFORMANCE, NO SURPRISE.... PRICE - THAT'S YOUR CALL (800) 442-3097.**



Studio Shot of the ABB Totalflow NGC

NGC 8200 Training

The training schedule for the New NGC 8200 Natural Gas Chromatograph (T13) is as follows:

October 24, 25, & 26

December 5, 6, & 7

Cost for the 3-day class is \$800 per student.

Call (800) 442-3097 option 3.

ABB TOTALFLOW PRESSURE SENSORS: RERANGE? & ACCURACY?

The ABB Totalflow flow computer uses a pressure transmitter that is selectable according to a specific maximum pressure range. When properly calibrated, a single pressure range can be used in many different pressure requirements. Selecting a transmitter with a high pressure range may come close to providing a **“one transmitter fits all”** possibility. To correctly apply a pressure transmitter for use over a wide range of pressures, it is necessary to have an understanding of sensor reranging and accuracy.

Reranging of a pressure transmitter is the process of redefining the minimum and maximum measurement points of the device. The difference between these two points is referred to as the Calibrated Span of the transmitter. The ABB Totalflow Pressure Transmitter can be reranged or calibrated from 100% of URL (Upper Range Limit) of the pressure sensor to a minimum of 20% of the URL and any percentage between 20% and 100% URL.

Accuracy of a pressure transmitter is determined by comparing its pressure output value to a known pressure standard. Totalflow includes in its pressure transmitter accuracy the combined effects of the sensor linearity, hysteresis and repeatability at reference conditions. The accuracy remains constant across the allowed “rerange” limits i.e. calibrated span. The Totalflow pressure transmitter has a stated accuracy of +/- 0.05% of Calibrated Span for the XSeries flow computer and +/- 0.075% of Calibrated Span for the microFLO flow computer.

The following example should give an understanding to the Rerange limits and Accuracy of a Totalflow pressure sensor.

Example:

Rerange: the Equation to use is: **URL x % Range Limit**

1,000 psia Upper Range Limit pressure sensor
 100% Range equals 1,000 psia which is 1000 x 100%
 20% Range equals 200 psia which is 1000 x 20%

Accuracy: the Equation to use is: **URL x % Range Limit x % Accuracy**

1,000 psia Upper Range Limit pressure sensor with 0.05% Accuracy
 Ranged at 100%:
 Accuracy equals +/- 0.5 psia which is 1000 x 100% x 0.05%

1,000 psia Upper Range Limit pressure sensor with 0.05% Accuracy
 Ranged at 20%:
 Accuracy equals +/- 0.1 psia which is 1000 x 20% x 0.05%

What this means is that a 1,000 psia pressure sensor can be calibrated from a maximum of 0 to 1,000 psia and a minimum of 0 to 200 psia and any pressure calibrated span between 200 and 1,000 psia. Calculated accuracy for this sensor would be +/- 0.1 to +/- 0.5 psia. One pressure sensor may fit many if not all of your pressure requirements.

WELLHEAD AUTOMATION SOLUTIONS

In an upset condition, it is sometimes important to control a flow rate, yet switch to pressure control. For example, a well might be set up to primarily control flow rate, but revert to pressure control if the line pressure increases beyond an acceptable limit. It might also be that the well needs to revert to pressure control, if the pressure drops too low, keeping the gas from flowing into the gathering system. We sometimes refer to the flow rate controller as the primary controller and the pressure controller as the override control. That is, in this case, the system primarily

controls on flow rate, but switches to the override controller (pressure) when certain conditions are met.

The ABB Totalflow XSeries of Flow Computers or Remote Controllers can implement the standard **Valve Control Application**. The Valve Controller has the option to be used with a Digital Valve Actuator or an Analog Valve Actuator. The Application positions a control valve to maintain control of either differential pressure (DP), static pressure (SP) or flow rate (FR).

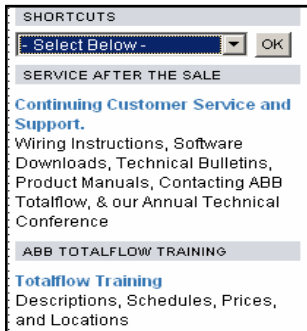
Additionally, an Override function

can be selected which will limit any secondary parameter to a user defined limit. Override, for example, may be used to maintain the well's production rate or to maintain the pressure entering the gathering system, or to shut-in the well or to bring-on the well, based on pressure. For example, when the override pressure sensor is installed downstream of the control valve, the well's on/off state can be coordinated with a compressor on-off state. This allows the well to automatically shut-in and come-on, based on the status of the compressor for that well.

Good valve control can provide Consistent Production and a Safe Environment. Proper valve control promotes a steady production of the well, insuring more flow time, and allows for an override of pressure or flow rate to prevent an unsafe condition in the gas system. If you would like to discuss the **Valve Control Application**, give Totalflow a call at (800) 442-3097 and ask for Technical Support.

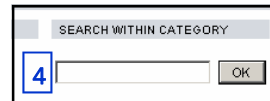
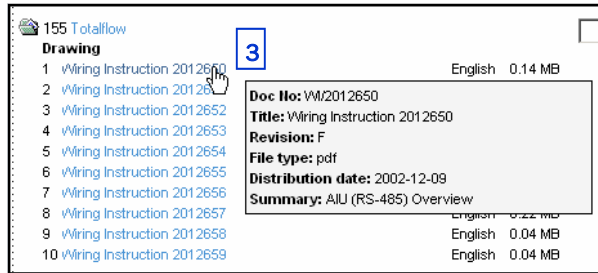
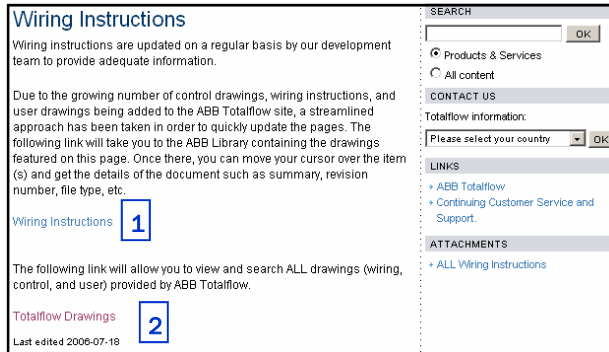
WEB UPDATES

As products and solutions offered by ABB Totalflow grow, so does the amount of information on the web site. Web site pages containing the wiring instructions, user drawings, and control drawings were becoming harder to navigate and manage as the number of drawings reached several hundred. In order to decrease page size, improve navigation abilities, and better manage the web site, a new layout has been created.



A new layout has been created.

All drawing pages can be accessed from the home page through either the shortcuts dropdown or the 'Continuing Customer Service' link - both along the right hand column. The drawing pages will have both a link for those specified drawings (1) and a link for all drawings in the library (2). When you follow the link, you will view a page that contains a list of drawings. Specific information about each drawing can be obtained by hovering over each document (3). You can also do a 'search within category' to find drawings pertaining to a certain subject (4).



The web team of ABB continues to implement some changes and improvements that need to be implemented in order to make the web site more user-friendly and less cumbersome. In the meantime, feel free to contact the ABB Totalflow Webmaster with any questions you may have. (teri.wickware@us.abb.com)

UPCOMING EVENTS

TRADE SHOWS

- Aug. 15-18: Appalachian Gas measurement Short Course
- Sept. 12-13: Liberal Gas Measurement
- Sept. 18-21: American School of Gas Measurement Technology
- Sept. 24-27: SPA Annual Conference & Exhibition

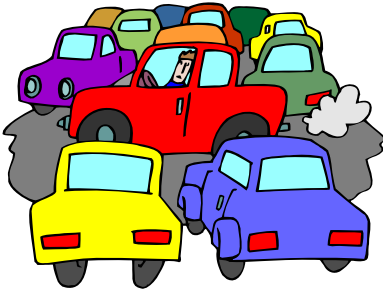
TRAINING

- Aug. 29: T1 (Basic Flow Computer)
- Sept. 12: T2 (WinCCU Basic)
- Sept. 18: T14 (SCADA Vision User)
- Sept. 26: T11 (XSeries XFeatures)

*** NEW ***

The training schedule for the New NGC 8200 Natural Gas Chromatograph (T13) is as follows:
 October 24, 25, & 26
 December 5, 6, & 7

Cost for the 3-day class is \$800 per student.



PARKING LOT EXPANSION

ABB Totalflow is experiencing rapid growth in employment - especially in the Bartlesville Oklahoma facility. For this reason, the employees of this facility (and any visitors) are aware of the parking lot obstacle course. Vehicles are being parked at the end caps, along the driveway, and even in the street that runs north of the facility. However, expansion of the parking lot begins this week and 111 additional parking spaces will be added over the next 6 weeks. If you visit our facility during this construction project, remember to drive with caution. Soon we will have the much needed space to accommodate everyone. We will keep you posted of the progress.

EYE ON DELIVERY

In late 2005, Totalflow recognized an energy industry upswing which was beginning to outpace our manufacturing forecast. At that time, our Manufacturing Planning Team began a work process reconfiguration to increase manufacturing output. Manufacturing responded with these changes:

- Increased Plant High Priority Inventory to allow a quicker time to build
- Added Two New Transducer Characterization Chambers

- Added another Flow Computer Assembly Line
- Hired additional staff in Manufacturing Assembly & Quality Control

Our efforts have paid off and we can now announce that delivery dates of flow computers have improved. We are presently at 8 weeks BUT BY NO MEANS ARE WE STOPPING THERE. Over the next few months **we will continue to improve our delivery times.** For the



near future, additional updates will be sent out every two weeks detailing further actions and improved deliveries. These will be distributed to those on our email list. Please contact Order Entry at (800) 442-3097 to verify that your email address is included in this list.

800 NUMBER OPTIONS

- Option 1 - Parts / Orders
 - Option 2 - Technical Support
 - Option 3 - Training
 - Option 5 - Sales
 - Option 6 - SCADA Vision
- (800) 442-3097**

WHAT'S NEW IN CUSTOMER SERVICE

TECHNICAL BULLETINS

- 137 - Corrupt Calibration Files
- 138 - Adding Flow Time to a Meter Display
- 139 - manual Gating of CO2 on Btu 8000
- 140 - Upstream vs Downstream Pressure Tap Explanation

T-13 NGC TRAINING

- The training schedule for the New NGC 8200 Natural Gas Chromatograph (T13) is as follows:

August 1, 2, and 3, 2006
October 24, 25, and 26, 2006
December 5, 6, and 7, 2006

Cost for the 3-day class is \$800 per student.

TECHNICAL SUPPORT

ABB Totalflow has added one additional Service Specialist in the technical support group to increase our coverage for customer technical phone calls. Call (800) 442-3097 for assistance.

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TOTALFLOW
PRODUCTS

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