CLA-VAL
Valve application News...
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Water Treatment Plants Solve an "Old Problem" Using Cla-Val Electronic Controls

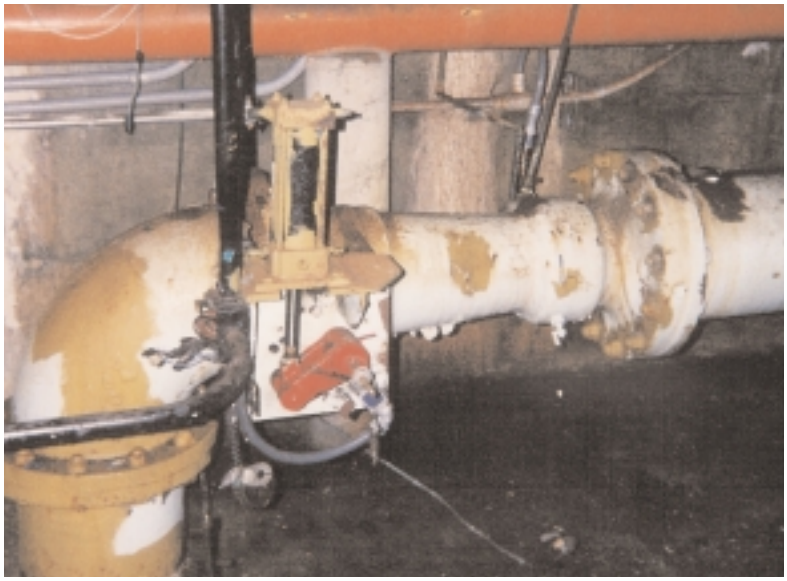
Since the introduction of Cla-Val's Metering and Flow control valve, Dan Esser, Cla-Val Eastern Region District Manager has found many varied applications to apply this technology. Some of these applications involved replacement of pump control valves, altitude valves and pressure reducing valves. One of the newest applications utilizes the 133 series valve as a filter plant effluent flow metering and flow control valve.

Many of the old water treatment plants in the eastern U.S. have used different pneumatic controls or electric positioning valves to control the effluent water out of the filters. These valves were installed many years ago and have become difficult to maintain and get parts for. Therefore, replacement of these products has been a challenge. "Customers tell us they can't get parts for them or they just want to update the plant" reports Dan. One of the first installations of this valve was at the Westport, Maryland treatment plant. They decided to solve their problem by replacing their old unit with the new Cla-Val technology. "We specified and installed a 6" Cla-Val Model 133 Metering & Flow Control Valve".

The old control system used a venturi and a mechanically operated butterfly valve to control flow while the Cla-Val Metering Valve requires no venturi and can operate reliably with minimal installation space. Long runs are not necessary to achieve necessary accuracy for flow control out of the filters. "Though the space in these plants is usually minimal, we can usually fit our valve in the lengths of existing pipe. Since the installation of spring 1999 "the valve has operated fine for metering and controlling the flow out of the filter".

Bowie, Maryland Upgrade

In early spring 2001, the Bowie, Maryland water treatment plant began to upgrade their facility. Working with Bill Moore, Eastern Regional Manager, Dan reviewed the old installation for an application of Cla-Val products. They discussed the application with the chief operating engineer regarding the existing valves. They ended up replacing two old venturi/pneumatically operated valves with 12" Cla-Val Model 133 Metering Valves. These valves have additional limit switches, which electronically lock out the wash valves when they are flowing.



The 133VC-3 controllers specified included the digital input option, which reverts to a zero set point when a high clearwell level is met. In addition, the valves were designed to close on a power failure. During startup and operation it was determined that an orifice plate was required for back pressure due to the piping configuration. Though the initial setting of the controller was difficult, the valves are working well. The operators can change the flow through either valve from their panel, remotely located 60 feet away in the control building. Much like orifice plate flow meters, the Cla-Val Metering valve operates like a variable orifice flowmeter. The valve is fitted with position and differential pressure transmitters that are fed into the Cla-Val 131VC-3 Flow Controller. Using the built-in valve coefficient curve, the flow is continually calculated based on these two inputs.

This becomes the controlled variable and is compared to a desired set point flow. If there is any deviation from the set point then the controller opens or closes the valve to achieve the desired flow. The optional digital input board permits numerous actions based on switch inputs. A high-level float switch wired into the controller makes the controller switch to either a second set point or to operate in manual mode to close the valve.

This successful installation demonstrates how Cla-Val electronic control valves are solving many new and "old problems"

For more information on Cla-Val problem solving products contact us at www.Cla-Val.com

CLA-VAL

PO Box 1325 Newport Beach CA 92659-0325

800-942-6326 • Fax: 949-548-5441 • Web Site: cla-val.com • E-mail: claval@cla-val.com

CLA-VAL CANADA, LTD.
4687 Christie Drive
Beamsville, Ontario
Canada LOR 1B4
Phone: 905-563-4963
Fax: 905-563-4040
E-mail sales@cla-val.ca

CLA-VAL SA
Chemin des Mesanges 1
CH-1032 Romanel/
Lausanne, Switzerland
Phone: 41-21-643-15-55
Fax: 41-21-643-15-50
E-mail: cla-val@cla-val.ch

AZTEC ENGINEERING, LTD.
Dainton House, Goods Station Road
GB - Tunbridge Wells
Kent TN1 2 DH England
Phone: 44-1892-514-400
Fax: 44-1892-543-423
E-mail: aztec-engineering.co.uk

DUMOULIN (LYON)
Avenue des Prés Seigneurs
ZI de dagneux - 01120
DAGNEUX France
Phone: 33-4-72-25-92-93
Fax: 33-4-72-25-04-17
E-mail: dumoulin-robinetterie@wanadoo.fr