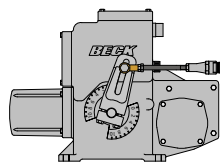


Sludge Valve Upgrades Reduce the Number of Corrective Work Orders



California U.S.A.

One of the largest wastewater treatment plants in the world recently finished a project for upgrading its sludge valve actuators. In a wastewater treatment process, these valves drain activated sludge from a reservoir and send it to a digester where it is processed. Normal operation of these valves is carried out using a manual handwheel; however, the operation is also commonly accomplished by means of electric, hydraulic or pneumatic actuators.

The facility maintains a log of all the corrective work orders that take place during a year and the sludge valve maintenance accounted for a large portion of them in the sludge processing section of the plant. Sludge often generates a lot of grit and sand, thereby hampering the mechanical equipment associated with transporting it. In

particular, the operation of conventional electric actuators were causing intermittent problems. These actuators have duty cycle limitations and reliability issues leading to poor control capabilities.

In an effort to reduce the number of corrective work orders, the actuators were replaced with Beck actuators. Beck actuators are uniquely designed electro-mechanical devices that offer constant, precise control without the performance and maintenance limitations of typical actuators. After three years of service in the waste water treatment plant, the number of corrective work orders for the new Beck equipment was reduced by 95%. Figures 1-3 show direct-coupled and linkage-connected Beck actuators along with typical butterfly valves that are used in the industry.



Figure 1

Direct-coupled Beck actuator on Filter Effluent Valve



Figure 2

Linkage-Connected Beck actuators in production



Figure 3

Linkage-connected Beck actuators on Filter Influent Valves



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