Monitoring drainage doors

APPLICATION B135

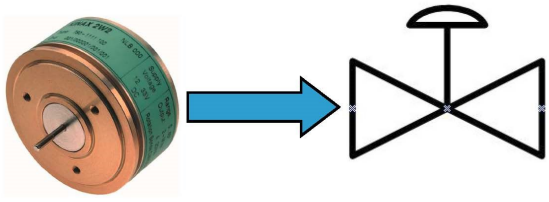
Type of Company: Public Utility
Location: Illinois

Sewage is created by residences, institutions, hospitals, and commercial and industrial establishments. Raw influent includes household waste disposed of via sewers, liquid waste from industry and commerce. Conventional sewage treatment involves three stages, called *primary*, *secondary* and *tertiary treatment*. To move sewage through these stages, it passes through different tanks via drainage doors in treatment facilities. The final water product can be discharged into a stream, river, bay, lagoon, or wetland, or it can be used for the irrigation of a golf course, green way, or park.


By David Medcalf, Wikimedia Commons: Sewage works

The Engineering Issue

- The engineer has a requirement to accurately control the position of the valve that controls drainage doors during treatment processes and integrate this information into an Emerson Process (formerly Fisher/Rosemount) Delta V plant control system.
- Since each drainage door has different opening characteristics, the customer must be able to modify the unit's analogue output in the field.
- Additionally, the unit must be small enough to install in the valve actuator housing and be able to operate in a high-temperature and generally challenging environment.



The field-programmable Kinax 2W2 the engineer chose has an accurate and repeatable linear 4-20 mA signal for the valve position that can be interfaced with the plant control systemIt has excellent temperature stability with no drag on the valve gearing. Finally, it is small enough (1.10 in deep, 1.95 in high) to easily fit in the actuator housing.

Problem. Solved.

 | www.api-usa.com | www.cecomp.com