

# Retrofitted Gate Station Handles Large Pressure Drop Safely and Reliably Using Fisher® EZH Series Regulators

## BENEFITS

- Reliable, Safe Gas Supply
- Increase Capacity
- Lower Installation Cost
- Decrease Cost of Ownership
- Ensure Gas Delivery

## APPLICATION

Wisconsin Public Service Corporation's North Manitowoc Gas Gate takes a first cut from the supply pipeline in one big step, while sizing for minimum contract pressure. This single-step pressure reduction is less complicated and allows use of smaller valves and gets more capacity than multiple pressure cuts requiring larger valves. In some cases, building another regulation run/cut may be unnecessary.

## CHALLENGE

The company expects lower installation costs and lower overall cost of ownership over the long term when updating its stations. To obtain this financial benefit, they needed to be able to handle a large pressure differential in such a way to safely maintain a reliable gas supply for its customers. Contamination such as oil, dirt, or debris may be present in the gas supply under higher pipeline pressures. The upgrade needed to be able to withstand contaminants as well as pressures and velocities that are detrimental to rubber components.

## SOLUTION

Wisconsin Public Service Corporation installed the rugged EZH Series regulator. The EZH is built for severe service, able to withstand contaminants as well as pressures and velocities that are detrimental to rubber components due to its hardened metal trim with a soft seat for reliable bubble-tight shutoff. (continued on page 2)



*"Fisher EZH Series regulators provide long-term reliability and security for our commercial and residential customers while reducing maintenance costs."*

**Jerry Poet, PE**  
Regional Gas Engineer,  
Wisconsin Public Service Corporation



Mike Lalley and Jerry Poet at Manitowoc Gas Gate EZH and EZHSO installation.



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An EZH spring-close regulator was installed as the monitor and the recently introduced Fisher EZHSO Series was chosen for use as the operator due to the potential 900 psig differential in the North Manitowoc Gas Gate. This model is designed to “fail open” with a positive spring action. If it should cease operating for any reason, there is a high probability it will remain wide open, allowing the monitor to continue controlling the downstream pressure allowing Operations time to respond to an alarm by sending a repair crew to the station. Generally, the crew can switch to the backup system with minimal impact on the gas supply to customers. In the worst case, if the monitor also fails, there is a high probability it will fail-

closed, shutting off the flow entirely to protect the distribution system from overpressurizing (depicted in Figure 1).

A new gate station for the City of Manitowoc being constructed during the summer of 2011 is employing the same method of pressure reduction in recognition of the effectiveness of this approach for high pressure drop situations. The EZH and EZHSO Series regulators will be installed for pressure reduction to replace existing equipment in many instances, depending on the service conditions at each regulation station.

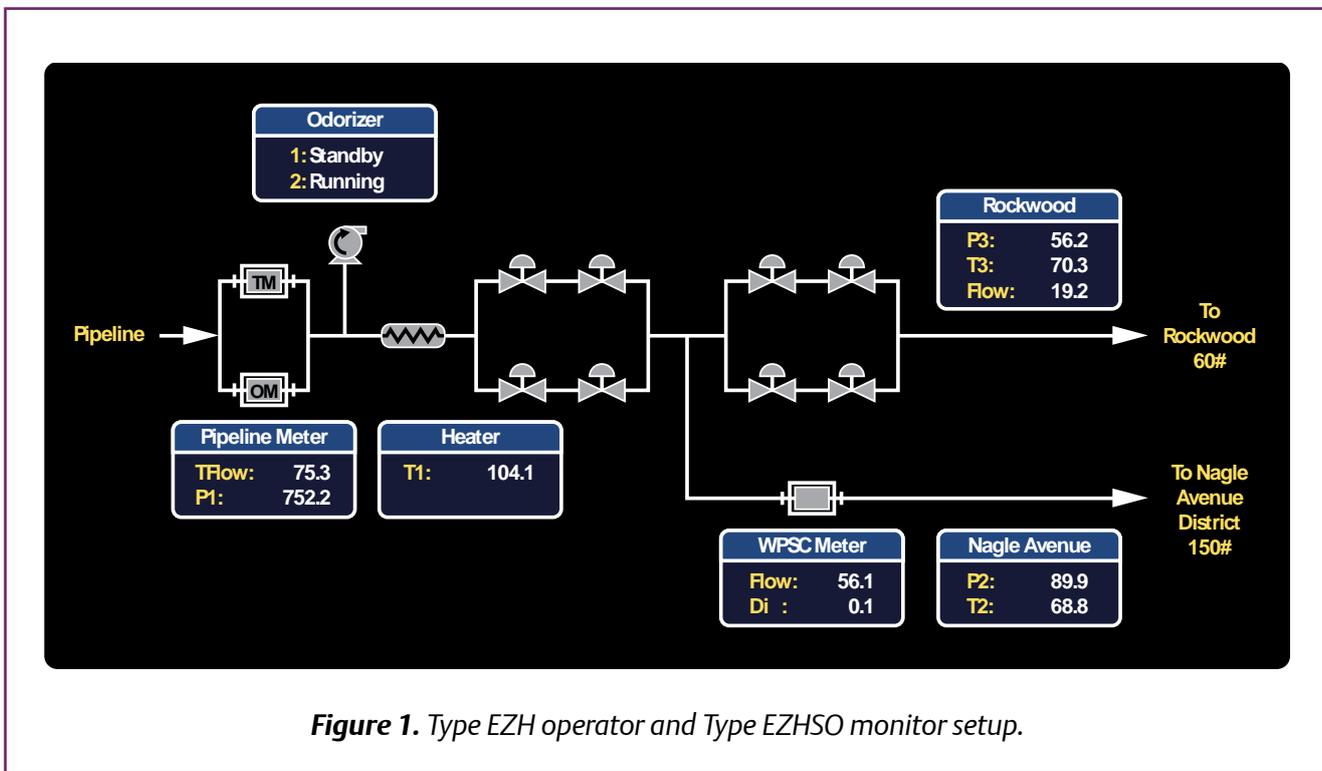


Figure 1. Type EZH operator and Type EZHSO monitor setup.

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