



PILOTED REGULATOR USED ON FIRE EMERGENCY SYSTEM

A major pulp mill had a fire emergency a short while ago. During the event, the water to fight the fire was taken from the main water system. Knowing that this depletes the water available from the boilers, manual valves need to be opened to take needed water from the secondary system. Unfortunately, some of the manual valves were not opened and the boiler shut down due to low feedwater levels.

The customer began a search for an “automatic” method of having the secondary valves opened in the event of depressurization of the main water lines. The feedwater main lines are normally 85 psi, and the customer requires that the secondary system opens when the main system pressure drops to 35-40 psi.

The solution was a piloted regulator using a Mark 67 main valve body with the Mark 70 as the pilot. The main valve would not be sensing any pressure; the main feedwater line pressure would be sensed by the pilot.

The valve would be set at 40 psi. At 41 psi and above, the pilot would be open and the main valve would be closed. At 40 psi or below, the pilot would close, starving the main valve diaphragm. The main valve would open and supply the necessary makeup water. This gives the boiler people less to worry about in the event of a fire or power failure.