

# Paper Mill Achieves One Year ROI on Installation of Fisher™ Control-Disk™ Valve

## RESULTS

- Saved \$120,000 USD in valve maintenance
- Increased uptime to 24 months



## APPLICATION

Turbine used to control header pressure

## CUSTOMER

Paper mill in the United States

## CHALLENGE

This application was originally designed using an eccentric-disc butterfly valve. In the late 1990s, the mill installed a segmented ball valve in order to achieve greater control. With the greater control came an increase in maintenance. Yearly maintenance was around \$40,000 USD. Loop response required fast and frequent adjustments to maintain tight control of the header. Because of the constant movement, excessive seal, ball, and bearing wear was occurring on the segmented ball valve. The extensive wear was causing high maintenance costs. A seal with PEEK (polyetheretherketone) bearings was tried in an effort to reduce the ball wear and help reduce damage to the ball, but annual maintenance was still required. The paper mill needed a solution that maintained control and improved maintenance time between shutdowns. They wanted to reduce maintenance costs and go two years without shutting down the turbine.

## SOLUTION

The segmented ball valve was replaced with a Fisher™ Control-Disk™ valve. Sizing showed the NPS 18 Control-Disk valve would operate in the 25-70% area, which would provide an acceptable control range per Emerson's EnTech™ Toolkit definition for installed gain (between 0.5 and 2). Installing the Control-Disk valve resulted in no seal-to-disk contact or wear when controlling and the lighter disk weight caused less bearing wear. Since the installation in 2010, an estimated \$40,000 USD per year has been saved on valve maintenance costs.

*The valve has operated for more than three years with no problems.*

**RESOURCES**

**Brochure: Fisher Control-Disk Valve**

<http://www.documentation.emersonprocess.com/groups/public/documents/brochures/d351602x012.pdf>

**Brochure: Fisher Control-Disk Valves: Performance Over a Wide Control Range**

<http://www.documentation.emersonprocess.com/groups/public/documents/brochures/d352213x012.pdf>

**Webpage: Control-Disk Valve**

<http://www.emerson.com/en-us/catalog/fisher-control-disk>



*Fisher Control-Disk Valve*

 <http://www.Facebook.com/FisherValves>

 <http://www.YouTube.com/user/FisherControlValve>

 <http://www.Twitter.com/FisherValves>

 <http://www.Linkedin.com/groups/Fisher-3941826>

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