

# Fisher® Control-Disk™ Valves Maintain Chiller Temperatures and Reduce Energy Usage at CAMECO Uranium Refinery

## RESULTS

- Maintained chiller temperature between 26- and 28-degrees Celsius
- Reduced energy usage by the chiller from 100 to 80 amps



## APPLICATION

Cooling-water, heat-exchanger system

## CUSTOMER

CAMECO uranium refinery in Blind River, Ontario

## CHALLENGE

Canadian Mining & Energy Corporation (CAMECO), headquartered in Saskatoon, is growing along with the nuclear power market worldwide. Its refinery in Blind River, Ontario processes uranium ore for new nuclear facilities in Canada, the US, India, and Australia. The transformation of uranium ore to nuclear fuel is a complex process, many parts of which require tight control.

Two, four-inch (competitor) TFE-lined plug valves with rack and pinion actuators and pneumatic positioners were installed on a cooling water, heat-exchanger system, but not performing well. Chiller temperatures varied from 26 to 35 degrees Celsius and drew up to 100 amps of power. Though not in the radio-active area of the plant, these valves are considered critical because they help the plant reduce its energy usage.

No piping rework was needed, but CAMECO installers did add spool pieces to make the new Fisher Control-Disk valves fit where the old plug valves had been.

***“The Fisher Control-Disk valves have enabled our compressors and chillers to run smoothly, with less loading and unloading required. Control of temperature, by varying flow rate, is also more accurate and consistent.”***

Jonathon Smith  
Process Engineer  
CAMECO, Blind River plant



### SOLUTION

Emerson sales engineers from Lakeside Process Controls recommended replacement Control-Disk valves. Emerson Process Management supplied two four-inch, stainless-steel lugged, size 1 versions of the new Fisher® butterfly design.

The unique, patented disk profile and true equal-percentage characteristics enable the Control-Disk valves to adapt to changing process conditions and to provide control over a wider range. In this situation, the new valves maintained chiller temperature within two degrees (26 to 28 Celsius) and reduced the energy required to 80 amps or less.

### RESULT

“The Control-Disk valves worked well, even before they were fine-tuned,” said Jonathan Smith, a process engineer at the Blind River plant. “We have tried competitors, but we always return to Fisher valves.”



*The two new Control-Disk valves installed at CAMECO include Type 2052 actuators and FIELDVUE™ DVC6020 digital valve controllers with Advanced Diagnostics.*

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