

Plugging Eliminated in Blow Down Control Valve using Fisher® Dirty Service Trim

RESULTS

- Eliminated frequent valve tear-down due to plugging of the trim cage.
- Expected flow rates were achieved even with entrained particulates in the flow stream.



APPLICATION

Glycol exchanger blow down control.

CUSTOMER

Oil producer in Alberta, Canada.

CHALLENGE

The company's first ever oil sands project uses an in-situ recovery technique known as steam assisted gravity drainage (SAGD) to develop bitumen resources from the Clearwater formation. Current plans are for over 90 percent of the water used for steam generation to be recycled from the produced water, which is separated from the bitumen. The plant will ramp up production over the next two years to achieve an anticipated peak production of more than 30,000 barrels per day.

Only a few weeks after being placed into operation, plant personnel contacted their Emerson Local Business Partner (LBP) because a three-inch control valve with anti-cavitation trim was plugging up. The valve is down-stream of a glycol exchanger and controls the level in a steam separator.

Operators noticed that the valve would not pass the required flow and decided to have it pulled from service and checked out. The technicians noticed immediately that the cage holes were plugged with particulate.

A few weeks later, the cage plugged again and was pulled and cleaned once more. The valve needed to be pulled from service a total of eight times in a six month period and the site technicians determined that the particulate in the flow stream was going to be a permanent condition.

Fisher® Dirty Service Trim (DST) is a patented multi-stage, anti-cavitation control valve trim for use with fluids having entrained particulate.



SOLUTION

After a thorough review of the application and the service conditions, Emerson engineers recommended that the original trim be replaced with dirty service trim. Dirty service trim is a patented multi-stage, anti-cavitation control valve trim for use in services where the fluid may have entrained particulate that could plug the passages of, or cause erosion damage to, conventional anti-cavitation trims. The large passages allow particulate to pass through the valve and stage the pressure drop to prevent cavitation.

The original trim was removed and dirty service trim was installed into the existing valve body without removing it from the line. Expected flow rates are now being achieved.

RESULT

The valve with dirty service trim has now been in continuous service for more than a year with no plugging problems encountered.

For more information on severe service solutions, see us at www.fishersevereservice.com.

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NORTH AMERICA

Emerson Process Management
Marshalltown, Iowa 50158 USA
T 1 (641) 754-3011
F 1 (641) 754-2830
www.EmersonProcess.com/Fisher

LATIN AMERICA

Emerson Process Management
Sorocaba, Sao Paulo 18087 Brazil
T +(55)(15)238-3788
F +(55)(15)228-3300
www.EmersonProcess.com/Fisher

EUROPE

Emerson Process Management
Cernay 68700 France
T +(33) (0)3 89 37 64 00
F +(33) (0)3 89 37 65 18
www.EmersonProcess.com/Fisher

MIDDLE EAST & AFRICA

Emerson FZE
Dubai, United Arab Emirates
T +971 4 811 8440
F +971 4 886 5465
www.EmersonProcess.com/Fisher

ASIA PACIFIC

Emerson Process Management
Singapore 128461 Singapore
T +(65) 6777 8211
T +(65) 6777 0947
www.EmersonProcess.com/Fisher



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