



For *Severe Service* Control Solutions, Turn to Fisher Technology & Innovation

Control Valve Case History

Industry: Oilsands and Refining
Application: HC Pump Bypass

Overview:

An oil company converts bitumen to synthetic oil at an upgrading facility. Their operations group called Spartan about control valves that were plugging. During startup of the Residue Stripping Unit, the flow through two Fisher Cavitrol III valves dropped off significantly for no obvious reason. The valves were pulled from the line and disassembled. The Cavitrol III cages were plugged with catalyst that had carried over from an upstream reactor. Although not expected, Operations determined this "carry over condition" could occur during normal operation. Commissioning and start up of the RSU could not continue until this plugging problem was resolved. The customer needed a quick long-term solution.

Process Conditions:

Fluid	Stripper LT Distillate
P1	19,100 kPag
P2	150 kPag
Temp	90 C
Pv	137 KPag

Solution:

The application required an anti-cavitation style trim without small holes or passages that could trap catalyst fines. Fisher Dirty Service Trim (DST) is suited to the application requirements. DST trim prevents cavitation by staging the pressure drop. The large passages in the DST allow particulate to flow easily through the valve. The customer needed the valve trim in a week. Emerson's Instrument and Valve Service Centre, located in Edmonton, manufactured the trim sets on time. Their trained technicians installed the trim sets in the existing valves.

Customer Benefits:

Within two weeks both control valves were up and running with the DST trim sets. Because the customer was so satisfied with the performance, they converted three more valves to DST that same month. All five valves have been running for 18 months with no problems.



SPARTAN CONTROLS

CH1 HC pump Bypass DST.doc

