

Hydrocarbon Processing Terminal Saves \$80K USD Yearly in Servicing with a 4-Stage Fisher™ Dirty Service Trim

RESULTS

- Avoided 50 hours of trim maintenance and repair, saving approximately \$20K USD per valve
- Avoided running on standby pumps every three months, safeguarding terminal operations
- Ensured minimal downtime by using a retrofitted anti-cavitation solution

APPLICATION

Raw crude wellhead feed

CUSTOMER

The customer is an onshore hydrocarbon field in India. Its crude oil produce is transported to refineries through a continuously heated and insulated pipeline.

CHALLENGE

The 3-stage 6 in HPT Cavitrol™ III valves that supplied the terminal required servicing every three months due to changing conditions leading to cavitation, cage clogging, and erosion damage. The trim is removed, unclogged, replaced for soft parts, and reattached into the circulation. During this time, the plant ran on standby pumps.

SOLUTION

After a thorough review and an informed valve selection process, the plant switched to a 4-stage Fisher Dirty Service Trim (DST). Its anti-cavitation design can handle high-pressure drop applications of up to 4200 psid, eliminating the associated damage, vibration, and noise causing quarterly downtimes. On the same note, the retrofit design ensured proper sizing and customized pressure drop staging.

Fisher field service personnel installed the valves on-site to guarantee access to valve performance analysis, which prevents unmonitored valve problems from creating irreparable damage. Such an end-to-end solution enhanced plant reliability and saved the customer \$400,000 USD on trim servicing in the next 5 years.

With this impressive project history, Emerson established a trusting relationship with the customer and won two big projects with them. We were also issued a performance certificate for the valve installed.

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The Fisher Dirty Service Trim (DST) offered a multi-stage control valve solution that prevented cavitation due to high-pressure drops, and long-term reliability which eliminated quarterly maintenance downtime in the terminal.



Figure 1. Original valve utilized an HP Cavitrol III 3-stage trim facing clogging issues



Figure 2. Retrofitted Fisher DST utilized a 4-stage trim

