

# Refinery Maintains Uptime and Operational Reliability with Fisher™ OEM Parts & Maintenance Strategy

## RESULTS

- Avoided unplanned shutdown with a customized valve solution.
- Achieved quick turnaround for parts repair and replacement through Original Equipment Manufacturer (OEM) valve support and services.
- Maintained uptime and refinery production with an improved OEM maintenance strategy.



**Fisher OEM parts and proper root cause analysis prevent stem packing erosion and maintain Vacuum Distillation unit's operational reliability in an Asia Pacific refinery.**

## APPLICATION

This proven result involves an application on a valve in vacuum distillation unit, which is an integral part of a refinery process. The vacuum crude column unit is fed the crude bottoms from the crude distillation unit. The unit is a complex column that fractionates the crude bottoms under vacuum conditions to improve separation into basic product streams.

## CUSTOMER

A refinery in Asia Pacific.

## CHALLENGE

The refinery had a Fisher E Series valve with Cavitrol™ III 1-Stage trim installed in VDU (vacuum distillation unit). The demand for daily operation and constant vibration caused the valve plug and stem assembly to break. To immediately resolve the issue, the customer manufactured a plug and stem assembly in-house without doing a root-cause failure analysis. After the newly manufactured plug and assembly was installed in the valve, the noise and vibration problems worsened.

## SOLUTION

The preliminary examination by Emerson's technical team found the in-house machined plug and stem assembly to be an incorrect match for the component tolerance criteria, resulting in



*Fisher E Series valve with Cavitrol Trim*

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noise and vibration. On the same note, improper stem surface finish caused erosion at the packing region and allowed the process fluid to leak.

The Emerson technical team recommended a customized replacement OEM trim to be installed.

The customer agreed since installation, the issue has been resolved.



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