

VDU Diverter Valve - Product Launch

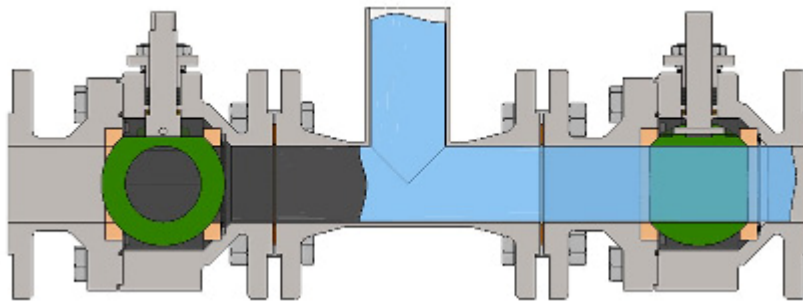
SchuF Fetterolf announced today the launch of a new design diverter valve for Vacuum Distillation Units (VDU).

Vacuum distillation is one of the most important separation processes found in the refinery. During vacuum distillation the constituent atmospheric residue fractions are separated to produce heavy, medium, and light gas oils as well as vacuum residue.

Vacuum Residue Challenges

The vacuum residue by-product that is produced is typically used as feedstock for FCC (Fluid catalytic cracking) or delayed coking. It is thick slurry like medium with an API rating of 5° to 7°. These traits can lead to several problems, not least of which is the accumulation of particles or coke deposits that form clumps. This in turn can partially block pipelines or damage equipment.

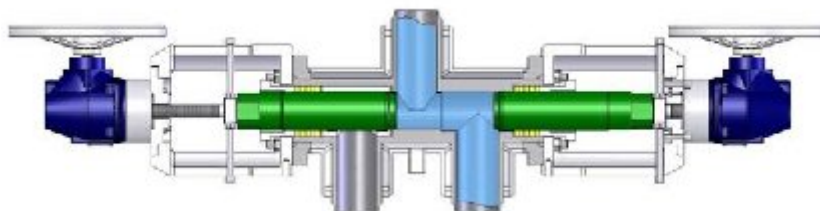
This phenomenon is a result of the use of ball valves and t-pieces which create dead space (areas where debris can gather), at the bottom of the VDU tower. The diagram below illustrates two ball valves and a t-piece. The dead space area is shown in black on the left hand side of the diagram.



The traditional solution is to back flush the pipeline segments or valve equipment where this occurs. However, this can reduce the line capacity by an estimated 10% which can result in a revenue loss amounting to millions of dollars per annum in a large refinery.

The VDU Diverter Solution

SchuF has today launched a new diverter valve design that eliminates this problem. The VDU Diverter valve replaces the ball valves and t-pieces. It's design is completely dead space free. There are no crevices, nooks, or corners for sediment and debris to settle.



The piston (in green) on the left hand side closes the left leg and is flush with the inlet. The right hand piston is in the open position but seals flush with the outlet. There is no redundant space for sediment, slurry, or coke particles to settle. As such the SchuF diverter valve can be seen as a seamless extension of the plant piping.

Because the diverter valve is dead space free, continuous flushing is no longer required.

The VDU diverter valve is available in sizes from 1 inch to 24 inches and pressure classes to ASME 2500# as standard. It can be provided in a Y, R, T or star design, and has a diverse range of options including: zoned or full jacketing, contoured or rotating pistons, control characteristics, integral flushing ports, replaceable seats and much more.