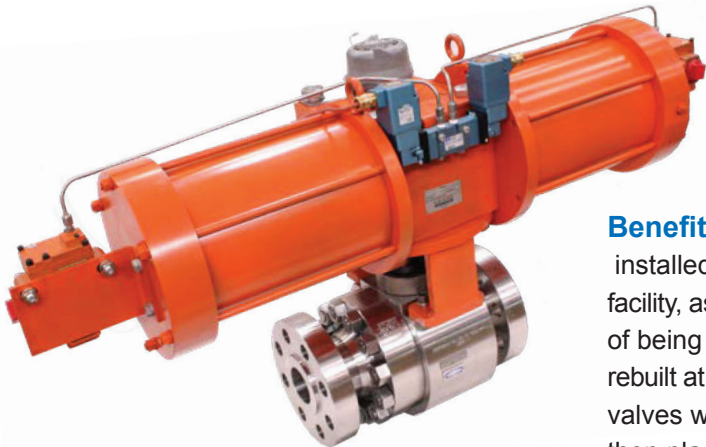


# ValvTechnologies' Success Story

**Background:** The plant had two main steam isolation parallel slide gate valves (PSG's) installed in this application. Design pressure and temperature for the application is 2350 psig at 1050°F (162 bar at 566°C). They were experiencing severe leakage when valves were required to isolate. From initial plant start-up, the frequency of valve maintenance was up to twice per year per valve. The cost of \$40,000 per repair, was a particular concern for the plant. These repairs were strictly limited to disassembly, cleaning and visual inspection, grinding the seats and discs and reassembly. Well before the plant anticipated they were faced with having to replace valve seat rings and discs. The plant management decided to look at their alternatives for an upcoming outage.



**Location:** India  
**Plant type:** Refinery  
**Industry:** Downstream  
**Product:** PulseJet



**Solution:** ValvTechnologies designed and manufactures a pulsejet valve to control the flow of syngas needed to disrupt the information of the char cake. The valve satisfies the service conditions for operation of eight months or more, depending on the actual cycle time of the valve. To develop the most robust solution, ValvTechnologies designed the valve to meet the end user service requirements and agreed to some of the harshest requirements available. A subset of the total requirements included the following:

Nominal valve size	3"
Pressure class	1,500
Cycle time	~0.75 seconds
Dwell time between cycles	90 seconds

**Benefit:** The first-generation equipment installed on site was pulled from the facility, as the facility was still in the process of being commissioned, modified and rebuilt at locations nearby. The updated valves were inspected, approved and then placed back in line at the refinery. To date, the valves have clocked over 50,000 cycles without notable issue and continue their path to an equivalent eight-month performance. The customer represents the largest petrochemical refinery in the world, capable of processing nearly 1.4 million barrels of oil per day. This processing takes an immense amount of energy. The customer saw the opportunity to increase profit margins by using their own petcoke feedstock waste to produce syngas, which is recycled back into power generation for use around the plant. The syngas production will eventually remove the need for the customer to import LNG and allows them to use the nearly 6.5 million tonnes of petcoke residual from their own coker units. This entire process is made possible in part by the efficient and reliable cycling of ValvTechnologies' pulsejet valve with EcoPack® stem sealing.