

PowerlokTM Through Bore Needle Valve - High Viscous Fluid



INDUSTRY

Chemical Process Industry

CUSTOMER

One of the leading manufacturers of Sulphuric Acid and Phosphate fertilizers in India.

BACKGROUND

With a rich history and industry experience of close to 100 years, the Customer is one of the leading manufacturers of Sulphuric Acid and Phosphate Fertilizers in India. With a rich knowledge in Technological Advancements of Process Industry, they have their roots in manufacturing of Speciality Chemicals with exports to more than 25 Countries in 5 Continents.

CHALLENGE FACED

With solutions ready for various fluid in the Chemical Process Industry, Thomas & Brian® was presented with a new challenge of handling a fluid with distinctive characteristics. Along with being highly viscous, the fluid was corrosive and needed to be handled at temperatures up to 220°C. Any reduction in temperature would result in the fluid drying up and clogging the Needle Valves used currently in the system. The Needle Valves would fail because of their conventional design. This resulted in higher downtimes along with useless inventories of damaged and useless Needle Valves. More than refining the production process, the engineers were involved in on site valve repairs.

OPERATING CONDITION:

Temperature : 220°C

Pressure Rating: 100 BAR

Application : Handling Highly Viscous Fluid Mixture at High Temperature

Media : Corrosive and Viscous Media with traces of Benzene and Sulphur

SOLUTION AND BENEFITS

Thomas & Brian® has worked with State run Indian Organizations in the past for similar applications. Those were more harsh as the fluid in case was Bitumen. In the current case, the fluid wasn't as tough to work with due to lower viscosity levels compared to Bitumen. The product suggested in the current application was a Needle Valve with Through Bore Construction. This valve solved multiple problems with it's ingenious design. It could handle viscous fluids even at higher temperatures like a dream due to the Inline Bore Construction. The valve was Rodabe due to this construction type. This helped in cases where 'dried' residual fluid needed to be removed, which was big challenge earlier.



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