



TAIL GAS VALVES

Principal Technology Inc. leads the sulfur recovery industry in the development of high performance Tail Gas Valve systems. Out-performing other designs, Principal Technology's Tail Gas Valves use components selected specifically for tail gas service that have proved to be reliable in scores of installations spanning more than thirty years. These specially designed Tail Gas Valves deliver exceptional performance, functionality and reliability.

Principal Technology's Tail Gas Valve design includes the use of a special disc seal system that meets ANSI Class VI shutoff criteria. This prevents seepage through the Tail Gas Valves, which is a serious problem because leaks to the incinerator can increase a plant's SO₂ emissions. The valve body is completely steam jacketed to maintain the entire body, shaft, disc and seal at a temperature between 280° and 300°F. The welded jacket is integrated with the body while steam and condensate connections are positioned to ensure complete distribution of the steam around the valve body and the sensitive shaft bearing blocks.





Real time temperature monitoring of the valve body internals is an important accessory feature available on Principal Technology's Tail Gas Valve system. Using finite element analysis and thermal modeling, our Tail Gas Valve systems measure and continuously monitor the internal body temperature, ensuring that liquid sulfur will not solidify. The temperature monitoring system:

- Measures the temperature at a critical point in the valve body
- Reports to unit operators if the temperature goes outside pre-set parameters
- Provides a means to continuously monitor the effectiveness of the valves steam jacketing and insulation systems

Dependable Tail Gas Valve operation goes beyond proper valve selection and installation. The Principal Technology Tail Gas Valve systems incorporate jog valves and automated accessories to facilitate regular partial stroking which increases dependability of the Tail Gas Valves and reduces the possibility of an undetected valve failure. Principal Technology also incorporates thermal maintenance systems for the piping adjacent to the tail gas valves as well as steam supply and condensate collection, piping, and controls to further ensure effective Tail Gas Valve operation.

Principal Technology's Tail Gas Valve systems are:

- Compliant with ANSI / ISA S84 Safety Instrumented System standards
- Shipped to the customer's site fully assembled and factory tested
- Available with exclusive Integral Temperature Sensors
- Composed of components designed and selected specifically for SRU tail gas service
- Available with continual valve monitoring
- Based on decades of experience with Sulfur Recover Units
- Available in multiple body styles to simplify retrofit installations
- Available with high-torque actuators

