Flue Gas and High Performance Butterfly Valves
Many of our original valve concepts have set the standards in the design and manufacture of flue gas, expander and power recovery butterfly valves. The refining, chemical, steel and power industries have depended upon our valve control products for decades as they handle extreme service conditions like temperatures up to 1600° F (872° C) with near sonic velocities and abrasive particulates.

This depth of experience allows TapcoEnpro to meet or exceed the high demands required to control the trip-out service of the power expander. The performance of the Power Recover Train in emergency situations requires the valve to close at stroke speeds of 0.6 second. Utilizing the TapcoEnpro TA-2000 Actuator System in conjunction with the TapcoEnpro Power Recovery Butterfly Valves, assures flawless operation during emergency shutdown conditions.

For Flue Gas control by means of throttling or shut off, the TapcoEnpro Cold and Hot Shell designs are manufactured to endure extreme operating environments. Our applications include:

• Expander Inlet Service
• Expander By-Pass Service
• CO Boiler Isolation
• Waste Heat Boiler Isolation
• Flue Gas Diversion
• Flue Gas Isolation

Over fifty years of TapcoEnpro hardfacing technology protects these assets from erosion. Our constant evolution of patented erosion-control technology combines with our proven design enhancements so that improvement to critical components like shafts and bearings minimize industry losses due to process flow erosion. This leading edge technology has made us the number one worldwide supplier of high performance flue gas butterfly control valves. Our metal-to-metal seat design and reliable tight shaft sealing assures minimal leakage for enhanced performance.

TapcoEnpro’s butterfly valve utilizes a covered stem design coupled with a patented purgeless stuffing box and a unique bearing support system for the stem. The bearings (close to the disc) are strategically located at the body wall for maximum support. This reduces the stem deflection and ensures proper disc alignment and operation. The one-piece forged thru-shaft resists complex bending and tortional stress resulting from changes in flow conditions and disc position.

We also can provide improvements to your existing butterfly valve technology, regardless of origin, by offering our design flexibility depending on the type of service requirements you face. TapcoEnpro pioneered the first hot leak test on a butterfly valve for accurate measurement under operating conditions. We also patented the purgeless stuffing box design to reduce maintenance and extend valve life thus saving refineries from costly nitrogen waste and downtime.

The design concepts developed for the TapcoEnpro Butterfly Valve are the results of both empirical and analytical data gained from over a quarter century of service in rigorous industry applications.