

Innovative Ideas

ITT Provides a Unique Valve Solution

Do your customers have unique processes requiring a customized valve solution? ITT does more than manufacture standard ball, diaphragm, and knife gate valves. With innovation and flexibility, we provide valve designs to meet specific customer needs. A power utility company in Florida is just one example of a customer who ITT listened to and offered a unique valve solution.

Listening to the Customer

The power company has a unique process in their burner system that utilized several ball valves. The ball valves needed to be replaced and the company wanted to make a change. They came to ITT because they liked the idea of replacing a number of valves with a single valve system. No other company has a burner shutoff valve like the Scotch Trifecta, so they came to ITT for a customized solution.

After meeting with the customer, ITT learned that their process utilizes mechanically atomized burners, which efficiently combust the fuel oil over a wide range of heat input values. The system includes a fuel return line from the burner tip, allowing adjustability of back pressure. This return line must be isolated from the pressured oil piping and the supply line when the burner is out of service. The system provides re-circulated oil to ensure the fuel is at a proper temperature when the burner is out of service.

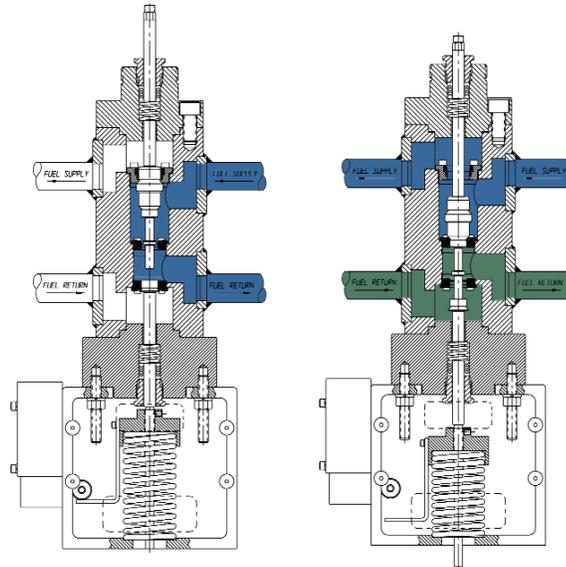
The power company's fuel source is a heavy diesel fuel so they needed a way to keep it flowing at all times. They also required a valve system that would meet their pressure requirements without any piping modifications.

The Solution

After listening to the customer, ITT engineers modified the Scotch Trifecta valve system to work with the customer's piping, fuel source, and pressure requirements. The Scotch Trifecta is a valve system with all components housed within a single valve body. Conventional systems require at least three valves and actual-



Scotch Valve Solution



Valve Closed (Fig. 1)

Valve Open (Fig. 2)

tors to accomplish what ITT provides with a single valve system. To overcome the customer's specific issues, ITT developed a oil only supply, return, and recirculation valve system.

How it works

With the burner out of service (valve in the closed position), fuel continually flows into the valve system and circulates out of the valve system (see fig. 1). This circulation process keeps the oil at a proper temperature and in continual motion so it does not settle in the piping. With the burner in service (valve in the fire position), oil flows into the valve system and out into the burner (see fig. 2). Excess oil is returned to the valve system through the return line and back to reservoir.

Conclusion

ITT created this unique valve for the customer after many discussions and tests with the customer. The prototype has been built and delivered to the customer. They are installing the valve to test it during their peak summer months. If your customer has a unique valve need, be sure to call ITT for a customized solution. You can also submit a new product idea at www.engvalves.com/ideageneration.html.