ANTI-SURGE CONTROL

Correct valve selection is an essential part of any anti-surge control system. Solar Turbines provides analysis and valve recommendations for the type and size of the valve required based on the steady state compressor map.

Additionally, Solar's anti-surge analysis evaluates the selected anti-surge valve for its ability to prevent surge during a fast stop and determines the maximum allowable package discharge volume for that valve. An anti-surge valve should not be sized based on application discharge volume but rather compressor and anti-surge valve performance characteristics.

When the calculated discharge volume is too low and not practical for the discharge piping, a second valve is required. This valve is usually referred to as the fast stop valve because it primarily protects the compressor when a fast stop or emergency shutdown occurs.

When the physical arrangement results in a very large discharge volume in the main anti-surge recycle loop, use of a hot bypass valve is recommended, where the gas recycles upstream of the cooler.

Solar's anti-surge control system has an independent surge detection and prevention algorithm. This algorithm uses an invariant coordinate system to eliminate the impact of the change in the process specific gravity.

To protect the compressor against a surge event, the anti-surge valve analysis document defines a site specific optimum control algorithm, anti-surge control valve, surge control calculations, and program constants based on purchaser-supplied operating conditions of the compressor(s). The report also documents valve performance and accessories requirements, flow-meter type and sizing data, flow-meter specification, and a recycle valve instrument diagram.
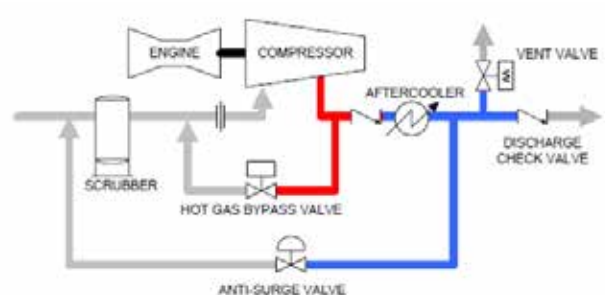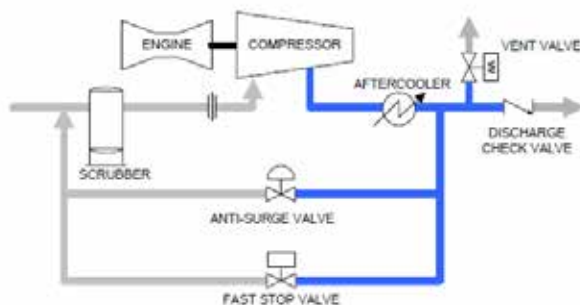
Additional Information:
Website: **www.solarturbines.com**
Email: **infocorp@solarturbines.com**
Phone: **+1-619-544-5352**