
Question 64: What are your typical operating guidelines to prevent compressor surge episodes? How closely do your FCCU operators approach the actual surge line of a compressor before adjusting operation?

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The unit engineer/compressor manufacturer should be able to provide guidelines to prevent surge episodes. These guidelines may include safe windows of operation for air rates, discharge pressures, and discharge temperatures. there are a few operational moves that can be done to help move the FCC Air Blower away from a surging operation:

1. Open the snort valve. A snort valve functions as the surge controller for an FCC air blower. Opening the snort will allow more air to flow through the compressor and move the operating point further away from the surge line; this change is usually automatically controlled by anti-surge equipment.
2. Lower the regenerator pressure to create less backpressure in the regenerator and to reduce the pressure ratio of the compressor. This adjustment will directionally move the compressor operating point away from surge. Lowering regenerator pressure can be done by opening the flue gas slide valves or lowering the regenerator bed level. Typically, an operator should not have to worry about approaching compressor surge as anti-surge control devices should already be installed on all compressors.

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Year

2016