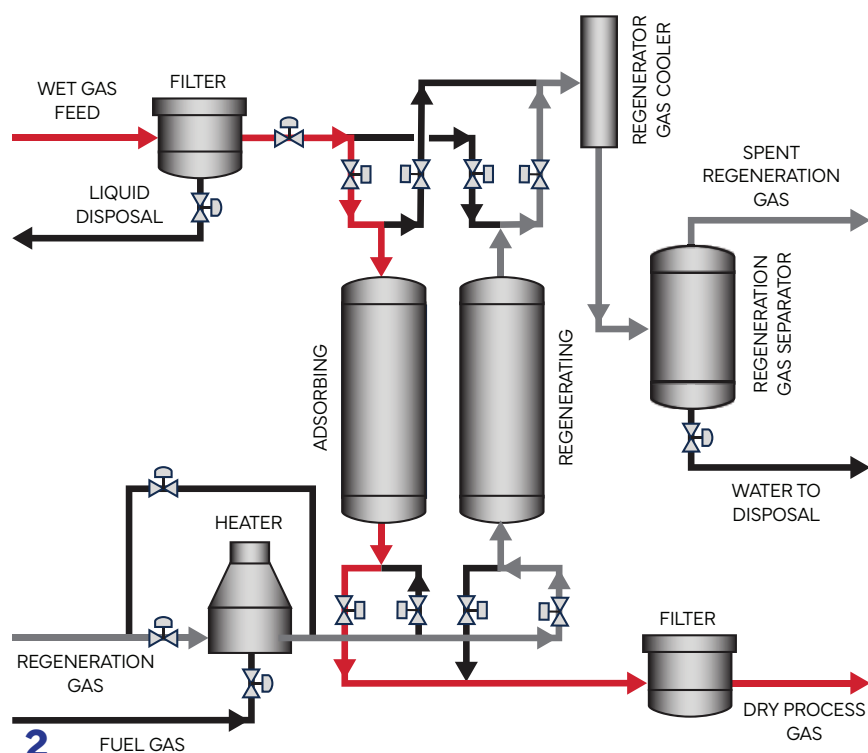


Industry Solution for MOLECULAR SIEVE PROCESSES

Molecular Sieve Dehydration constitutes a process that serves to eliminate water and impurities from gaseous hydrocarbon streams. The uninterrupted operation of a molecular sieve system is of great importance, given that the presence of moisture or contaminants can have a detrimental impact on downstream processes. A molecular sieve typically takes the form of a porous aluminosilicate, such as Zeolite. Molecular sieve vessels are composed of desiccant spheres, accompanied by ceramic balls and a mesh layer at the top and bottom to preserve the structural integrity of the bed. The micropores of the desiccant retain water and other larger molecules, while enabling smaller molecules to pass through.

Once the molecular sieve becomes saturated, it is necessary to regenerate it by expelling the accumulated moisture. A typical dehydration unit is equipped with two or more vessels arranged in succession. The operational sequence involves one vessel adsorbing moisture from the process stream, while the other undergoes regeneration. The regeneration process is facilitated by recirculating heated process gas to expel moisture and impurities, thereby restoring the molecular sieve to its original state. The entire procedure necessitates the use of several switching and isolation valves that must function reliably under extreme conditions.



INDUSTRY CONDITIONS

- ⇒ High Process Cycling
- ⇒ Abrasive Environment
- ⇒ Thermal Transients
- ⇒ Corrosion | Erosion

OUR SOLUTIONS

- ⇒ Tolerates cycling over 2 to 4 cycles per day
- ⇒ Designed for extreme processes and desiccants
- ⇒ Operates through excessive temperature swings
- ⇒ Withstands the presence of trace H₂S, CO₂ and moisture