Honeywell UOP

GAS PROCESSING

UOP MOLSIV™ Molecular Sieves for Gas Processing

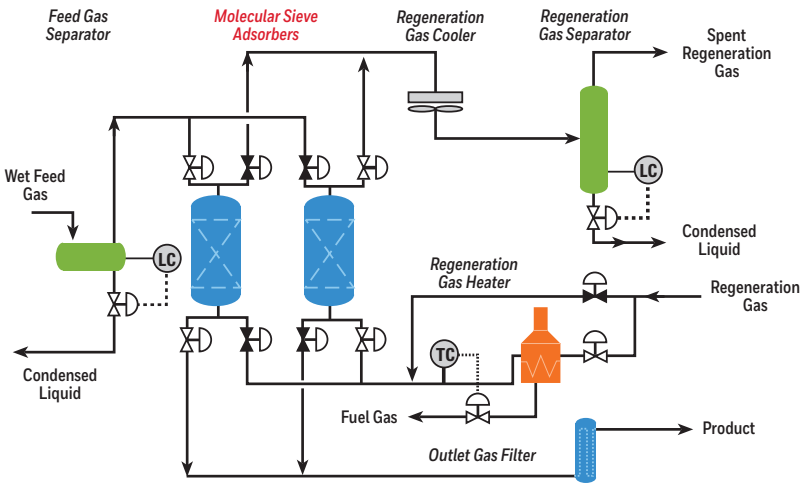
Molecular Sieve Description

UOP molecular sieves are characterized by their crystalline structure that adsorbs molecules readily, slowly, or not at all, and has the ability to selectively adsorb by size and polarity, making them efficient agents for drying and purifying liquids and gases.

UOP tailors the chemistry and structure of the materials used to create synthetic molecular sieve zeolites to provide solutions to meet a wide range of industry needs.

UOP molecular sieves are offered in various forms: beads, granules and extrudates, including standard pellets and UOP TRISIVTM pellets. The type, size and particle shape selected for each customer is determined by the application. Our extensive database allows us to select the optimum products on a case-by-case basis.

An Open Cycle Molecular Sieve Dehydration System



Application and Operating Ranges

Molecular sieves have a number of applications in the natural gas processing industry, including:

Natural gas dehydration

- Normal parameters: water saturated, 30-200°F, 100-1500 psig
- Regeneration is via dry or wet gas, yielding LNG or pipeline specifications, respectively

Effective dehydration and contaminant removal are critical to the successful operation of every gas processing facility in order to avoid unplanned shutdowns, costly equipment repairs and hazardous working conditions.

Natural gas mercury removal

- Combines with dehydration, one system, no additional sieve
- Mercury removal to <0.01 µg/Nm_3 out

Natural gas/LPG desulfurization

- H_2S, mercaptans, COS and sulfides can be removed
- Effluent with H_2O <0.1 ppmv and each sulfur type <1 ppmv

Natural gas CO_2 removal for "peak shaving"

- LNG plants inlet CO_2 1,000-20,000 ppmv, 40-100°F, 200-800 psia
- Effluent with H_2O <0.1 ppmv and CO_2 <50 ppmv

Ammonia synthesis gas purification

- Inlet CO_2 <20 ppmv, NH_3 <20 ppmv, 40-100°F, 100-1000 psig
- Outlet ppmv <0.1 NH_3, <1.0 CO_2

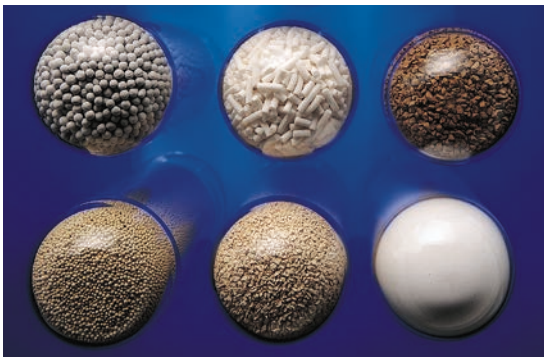
Experience

Number of operating units, worldwide:

• Natural gas dehydration	1,000+
• Dehydration with regenerative mercury removal	50+
• Natural gas treating (sulfur, CO_2)	200+
• CO_2 removal for “peak shaving” LNG facilities	100+
• LPG combined dehydration/desulfurization	100+
• Synthesis gas purification	100+

UOP has the products, expertise and processes that our gas processing, petrochemical and refining customers need for total solutions. From start to finish, our global sales, service and support staff are here to help ensure your process challenges are met with proven technology. Our extensive service offerings, coupled with our unmatched technical knowledge and experience, can help you focus on profitability.

We have more than half a century of experience in the design, start-up, optimization and trouble shooting of molecular sieve systems. Equipped with state-of-the-art tools, our highly trained and experienced staff is positioned around the world and dedicated to quickly and efficiently offering assistance. For more information



For more information
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