Guild Associates, Inc.
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Natural Gas and Coal Bed Methane Dehydration Systems

Natural Gas Dehydration Unit

Natural Gas Dehydration Systems are provided by Guild Associates as part of their portfolio for natural gas treatment technologies. The systems offered by Guild are adsorbent-based, using a variety of adsorbents appropriate to the dehydration requirements. System designs are optimized for the particular application, depending upon available feed pressure and pipeline specifications.

Guild Associates is best known as the supplier of Molecular Gate™ Systems for the removal of nitrogen and carbon dioxide from natural gas. With two-dozen systems underway, Molecular Gate systems are the leading technology for nitrogen rejection.

Guild has supplied numerous dehydration units to remove water vapor from natural gas and targets flow rates of less than 20 MMSCFD. While glycol systems are most commonly applied, adsorbent-based systems offer an attractive and operator friendly alternative for lower pressure feed streams.

Low-pressure adsorption-based systems used in natural gas are derived from systems used to dehydrate instrument air. While such systems can be attractive on a capital basis, they may not meet the requirements for reliability and flexibility found in the natural gas patch. The dehydration systems provided by Guild meet these standards, are designed for outdoor installation and operate without operator attention. Water removal levels to pipeline specifications of 2 – 7 lbs per MMSCF are easily achieved.

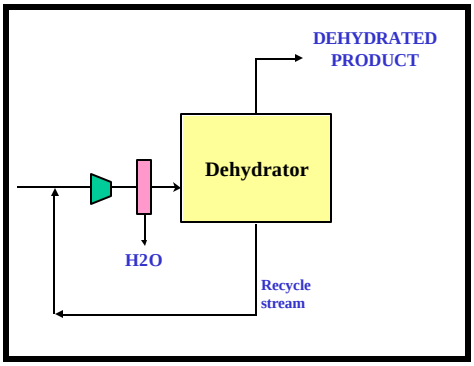
Systems consist of two adsorber vessels in which one of the vessels is removing water vapor from the feed stream while a second bed is regenerated, first by heating with a slip stream of dry gas and subsequently by cooling.

Equipment is shop-fabricated and consists of two adsorber vessels, a valve and piping skid using highly reliable switching valves, heater, a feed stream coalescing filter, and a control panel. Options are available for flow measurement and dew point measurement.

Coal Bed Methane Dehydration

Coal bed methane dehydration is an excellent fit for the technology. In this application the feed stream is compressed to 60 to 100 psig, and after cooling, liquid water exits the system. The resulting water vapor saturated stream enters the system where one bed removes water while the second vessel is re-generated. The wet regeneration stream is recycled and recompressed and the water leaves the system as a liquid. By recycling the regeneration stream, hydrocarbon losses are nil.

With an electric heater, permits for gas-fired equipment are avoided. Where gas engines are used to drive the compressor, heat from the gas engine exhaust can be used to provide the heat for regeneration.



Dehydration Flows for Coal Bed Methane

To date, adsorption-based drying systems have been provided for flows from less than 0.5 MMSCFD to 10 MMSCFD and larger systems can easily be provided. System turndown is to near zero flow.

About Guild Associates

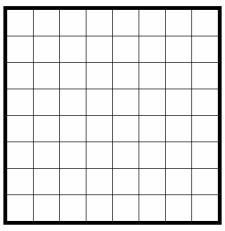
Guild Associates provides adsorption and catalyst systems to a variety of markets as well as shop fabricated engineered systems. Guild is the licensee of the Molecular Gate™ technology originally developed by Engelhard Corporation (now a part of the BASF Group) and has provided all systems to date.

Contact

To learn more about Guild adsorption technology contact Michael Mitariten, by phone at, 908-752-6420 or, by email at, mike@moleculargate.com

You can also visit us on the Internet at www.moleculargate.com

Guild is a licensee of Molecular Gate â Adsorbent Technology and Guild is solely responsible for all representations made herein.



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