Molecular Sieve Beds and Cryotraps

Application

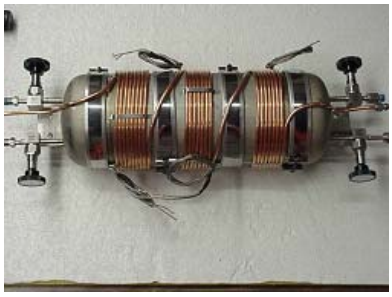
Molecular sieve beds and cryotraps are used frequently in tritium handling processes and other processes for drying gases, and trapping or removing impurities in inert gas streams.

Features

- High temperatures through cryogenic temperatures
- Low leakage
- High cleanliness
- Stainless steel
- High quality VCR fittings
- High performance valves.

Description

Molecular sieves are frequently used in tritium handling processes for drying inert process gas streams.



Example of heated and cooled mol sieve bed

They are also known for their ability to hold or trap transported gases in inert gas streams at certain clearly defined temperatures.

The molecular sieve is also used in the cryotrap, a combination of coiled tubes and mol sieve beds to control the passage of certain gases through a body of molecular sieve. The mol sieve can be used as a filter when used in combination with cryogenic cooling. For example, it can be effectively used to freeze moisture out of a gas stream and then to capture hydrogen or tritium from a helium stream.

Example of the internals of a cryotrap

Units can be custom designed and fabricated by Tyne at the Client's request.

Example of a small mol sieve bed with a moisture/impurity trap

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Uses for molecular sieve beds and cryotraps are varied and extensive so we have not attached specifications in this brochure. Please e-mail to discuss your requirements.

Specifications

Design	Custom designed to Clients requirements
Pressure Vessels	ASME Section VIII Div 1 Vessels
Piping	ASME B31.3 Piping systems
Leaktight	2 x 10-9 leak tightness requirements