



TECHNOLOGY

A Non-Intrusive Pressure-Line Dryer

OVERVIEW

Although it is straightforward to use desiccant to dry the air that is confined inside a small container, it becomes challenging when the air pressure also needs to be constant and monitored. If a desiccant holder is attached to the system, then the total volume of the system is changed, which will impact the pressure measurement. In addition, the system has to be opened in order to change expired desiccant which obviously also affects pressure.

A researcher at the University of Maryland has developed a system that isolates a desiccant holder utilizing semi-permeable membrane tubing and a Swagelok tee coupling. This keeps the air in the pressure line intact while water vapor in the confined air can migrate along the tubing to reach the desiccant. Detaching the desiccant holder does not affect the air trapped in the pressure line or the container, making it a non-intrusive pressure-line dryer.

Applications:

- Keeping air in a pressure line dry and free from effects of humidity changes

Advantages:

- Utilizing this concept allows pressure to remain constant in a small space or pressure line
- Relatively inexpensive components

CONTACT INFO

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Industrial Processing

EXTERNAL RESOURCES

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