

0038

**"Can There Be A Unified and Simple Filter Testing Standard?"**

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Wu Chen, Tieying Gong  
*Dow Chemical, Freeport, TX, United States*

Wu Chen & Tieying Gong, Dow Chemical The existing filter testing standards are application specific. For example,ASHRAE 52.2 standard is specifically for HVAC filters, ISO 4572 standard is for hydraulic fluid filters, and many more. These standards are sufficient and widely accepted for filter comparisons within each particular market segment. Challenges arise when considering different type of filters for the same application or using the same filtermedium for different types of filters. For example, when a user is tryingto replace a bag filter with a cartridge filter in a liquid filtration application, there is no information to followfor media selection. With the advancing filtration technologies and applications, there are more and more "cross over"of media used in different application segments and even cross the holy line of liquid/air filtration. This paper will discuss the available filter media comparison methods and use a few case studiesto illustrate how they can be used to compare filter performance. At the end a list of easy to measure media propertiessuch as air permeability, weight, mean flow pore size, .....are suggested to be a standard property listfor all media.

Bio

Dr. Wu Chen is a Research Scientist with the Dow Chemical Company. He has over 20 years of practical experience in the field of solid/liquid separation and gas filtration technologies and markets. He got his Ph.D. degree in Chemical Engineering from Univ. of Houston. He is currently the chair of AFS Education Committee and had served as the chair of AFS, board of directors, and conference chairs in the past. He was awarded AFS Frank Tiller Award in 2002, AFS Well Shoemaker Award in 2005 and Fellow Member Award in 2010.

Dr. Tieying Gong is a contractor with the Dow Chemical Company. Her specialties are in the colloid sciences and solid processing technologies including filtration, silo design, coating and particle characterizations. She got her Ph.D. degree in Chemical Engineering from Colorado School of Mines in 2002 and earned two NASA Tech Brief Awards.