

Energy Use, Life-Cycle Cost and Sustainability of Air Filter

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Abstract

From basic flow dynamics to field application of air handling units, this topic will discuss energy required to run air through a filter and how the resistance to airflow increases with dust loading through filter service life. Life-cycle cost analysis will be introduced along with methods proposed recently to classify a filter's energy efficiency to promote sustainable development and use of air filters for a green and clean environment.

Bio-sketch

Dr. Christine Sun is R&D manager of Freudenberg Filtration Technologies, L.P., located in Hopkinsville, KY. She obtained Ph.D. in Chemical Engineering in June 1995 from Tsinghua Univ., Beijing, China. Prior to her current job, Dr. Sun was a research professor at the Textile and Nonwovens Development Center at the University of Tennessee. She has 18 years of experience in material science, textiles/nonwovens, filter media development, and applications, with ~90 technical publications in the area. Currently, Dr. Sun is an active member of ASHRAE, AFS, TAPPI, NAFA, SAE, and ISO work groups.

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