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## **Cleaning and Testing of Metal Filters Contaminated with Plastics & Residuals**

Status: Accepted

Category: 2 Filter Testing

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**Key Words:** Solvents, Cleaning, Steam, Bubble Point, Microscopic

Over the past three decades, the market for polymers has grown. Many applications use costly cleanable metal filters and/or parts which require cleaning processes involving the use solvents, chemicals, superheated steam, or high temperature oxidation methods. The decision on how a filter is cleaned depends on the

- - contaminant,
- - metallurgy of the filter,
- - configuration and size of the filter.

Once the filter is cleaned, it must be tested to ensure cleanliness and integrity prior to being returned to the manufacturing process. There are various tests that can be performed depending on the cleanliness requirement, such as industrial applications, oxygen service applications, cleanroom applications, and others. For integrity, tests such as Bubble Point and Wetted Airflow pressure values are compared to manufacturers' or customer specifications to determine whether the filter can be deemed usable.

This paper describes methods used to determine the cleanliness and integrity of metal filters after cleaning.

### **Bio**

Sue L. Reynolds has been with Carolina Filters for 20+ years. During that time, she has worked in all aspects of the cleaning operation with major duties involving process development, procedures, and working with customers in Technical Sales.

She has a BA in Chemistry from Winthrop University and a Masters in Mathematics from the University of South Carolina. In the past, she worked in the education field teaching chemistry, physics, and various levels of mathematics in private & public schools, at the University of South Carolina, and at the Carolina Technical.

She is affiliated with AFS and has served as Chairperson of the Dixie Chapter. She has published several papers with AFS that cover various aspects of cleaning.