



## Depth Filtration Particulate Elements

Monnier's surface filtration elements, which only offer one point of impaction, has multiple layers of our phenolic impregnated cellulose cloth elements to provide:

- **Multiple points of impaction**
- **Durable construction**
- **Negligible pressure drop over a prolonged life span**

### Element Construction

This all begins with the production of our particulate filter elements. Elements start as cellulose cloth, which is wound on a mandrel, cured, and cut to length. With each rotation, a new layer of impaction is formed, creating a final product that provides a clear advantage over our competitors' sintered plastic elements, as made evident by a case study of bottom dump rail cars.

### Case Study

A series of Monnier Particulate Filters are used on bottom dump rail cars to protect the valves and cylinders in the pneumatically actuated dump gates. In 2011, after 5.5 years of service, a number of these bottom dump rail cars were decommissioned and the railcar OEM offered to return the various components to its suppliers for analysis. Naturally, Monnier Inc. took this opportunity to test our products' performance.

After more than half a decade of service and with no maintenance done to the filters, Monnier's particulate filters performed exceptionally. In the photo to the right, the poor quality of the inlet air is evident by the condition of the inlet port, whereas the outlet port appears as if it were just machined. Furthermore, the element was severely impacted with rust, scale and particulate as seen in the difference between the old and new elements.

Despite these challenging conditions and the amount of particulate impacted in the elements, further testing showed only a negligible pressure drop (5psi), proving the effectiveness and superiority of our multi-layered particulate filter elements.



### 92-244 Filter

after 5.5 years of service



The inlet port shows evidence of poor quality air, whereas the outlet port appears as clean as if it were just machined.