

FILTRATION SYSTEMS FOR TRANSPORTATION AND INDUSTRIAL APPLICATIONS

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Learning Made Simple, Visual, and Interactive

The THORS *Filtration Systems for Transportation and Industrial Applications* course introduces the learner to the filtration system components, filter elements, and media materials. The course covers various filtration principles, key performance attributes, and filtration system types. Presented in THORS' visually engaging format, this course will equip the learner with an in-depth understanding of filtration systems.

Credit Hours **2.5**

Learning Objectives

- Define filtration systems.
- Describe the types of filter elements.
- Identify the different types of media.
- Explain various filtration principles.
- Identify the key performance attributes used to rate the performance of a filter.
- Recognize the types of filtration systems.

Table of Contents

I. Filtration System Components

- Filters
- Filter Element
 - ▣ Panel Style
 - ▣ Cylindrical
 - ▣ Direct Flow
 - ▣ Channel Flow
- Media
 - ▣ Sintered Metal Media
 - ▣ Porous Ceramics Media
 - ▣ Fabric Media
 - ▣ Screen
 - ▣ Cellulose Media
 - ▣ Porous Plastic Media
 - ▣ Resin Bonded Media
 - ▣ Unconsolidated Media
 - ▣ Membrane Media

II. Filtration System Operation

- Filtration Principles
- Contamination Sources
- Key Performance Attributes
 - ▣ Efficiency
 - ▣ Contaminant Capacity
 - ▣ Flow Rate
 - ▣ Flow Restriction
 - ▣ Micron Rating
 - ▣ Duty Cycle
- System Maintenance

III. Filtration System Types

- Based on Filtration Methods
 - ▣ Mechanical Filtration
 - ▣ Chemical Filtration
 - ▣ Biological Filtration
- Based on Removal Mechanisms
 - ▣ Surface Filtration
 - ▣ Depth Filtration
- Based on Applications
 - ▣ Air Filtration
 - ▣ Hydrocarbon Filtration
 - ▣ Hydraulic Fluid Filtration
 - ▣ Water Filtration

