



Introduction to air pollution control

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Air Pollution Control

- Industry Problem
- Operator Comfort
- Filter Concept

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Industry Problem

- Low molecular weight chemicals (VOC's) cause occupational asthma
 - Hydrocarbons
 - Formaldehyde
 - Isocyanates
- Flux fumes are created when heated during soldering
 - Colophony



Operator Issues

- Problems
 - Operator turnover
 - Workers compensation
 - Absence
- Comfort
 - Eye and nose irritation
 - Headaches
 - Bronchitis
- Productivity
- Efficiency
 - Profitability



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Options

- Enclose the operation and work in a suction cabinet
- Work with a spot suction which captures the pollutions at the source
- Have the employees wear protective suit
- Eliminate the source



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Solution

- Combination of impregnated material and activated carbon
 - Eliminate low molecular weight chemicals
 - HEPA filtration capturing down to $\sim 0.3\mu$ particle sizes
- Perfect extraction capacity and media volume
 - Dwell time in media for chemical adsorption process
- User friendly system operation
 - Quiet operation
 - ESD Safe
 - Flexible
 - Design must accommodate particles, flux and chemical vapors

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