

EVE 402 Air Pollution Generation and Control

Chapter #5 Lectures (Part 8) The end...FINALLY

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Particulate Control Equipment Selection Considerations

- Collection efficiency as a function of d_p
- Pressure drop (ΔP)
- Capital investment
- Operating costs
- Space requirements

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Selection Guidelines

Device	Used when...
Gravity settling chamber	Precleaning of coarse particles from a gas stream is required
Cyclone	Dust is coarse; concentrations are high; size characterization is required; high efficiency is NOT required
Wet scrubber	Dust is fine(r); relatively high efficiency is required; moisture is not objectionable; gases are combustible; gases and particles need to be removed
Baghouse filter	Very high efficiencies are required; volumes and temperatures are reasonably low; valuable material needs to be recovered
Electrostatic precipitators	Very high efficiencies are required; large volumes of gas are to be handled; valuable material needs to be recovered

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