

BASIC EQUIPMENTS/COMPONENTS OF THE SYSTEM

Any air pollution control system consists of suction hoods, ducting, blowers & control equipments like scrubber/dust collector etc.. The fumes are extracted by hoods & conveyed by ducting and controlled by scrubber/collector/separator. Blower connected with suitable electric motor supplies the entire energy. Stack/chimney design & height is also important in dispersing/diluting the ambient air.

1. Whether fumes/dusts are extracted (being sucked) from the closed tanks/vessels/reactors or from open tank/vessels/Furnace.
2. Tank /vessel dimensions: Length x Width x Height or Diameter. Charging whole or access door area, vent size. If furnace is used - then total expected air+dust+gases volumes.
3. Brief process details like chemical reactions (preferably With vol/wt. Proportion). Dusting /fumes source & application details.
4. Hoods Placement - Whether canopy hood over the tank is suitable/only right choice or other lip/push-pull or direct evacuation is required. Please note that the hoods are very important for effective suction of fumes/dusts from the source. More closure (enclosure) type of hood will require lesser CFM & hence smaller sizes of ducting, blower, scrubber, and dust collector so the system is economical.

STATIC PRESSURE REQUIREMENTS - The pressure loss is calculated by knowing the ducting layout & resistance in the control equipments like scrubbers/dust collectors. etc.. Please furnish the proposed system layout details duct routing, nos. of bends, ducting length, scrubber / blower placements etc.

CONTAMINANTS/ FUME/ DUST DETAILS - Are these contaminants a) solid particulates and/or b) liquid/mist and/or c) gas (molecular form). Let us know the complete available details including particle size in microns & in percentage by wt.. Dust /gas loading in air in mg/m³ or in PPM (parts per million). Physical & Chemical characteristics of contaminants like - soluble in water, insoluble in water, corrosive, abrasive or sticking tendency.

REASONS FOR CLEANING FUMES/DUSTS

- a) To protect the plants equipments.
- b) Air pollution control
- c) Subsequent process use.
- d) Health of workers.
- e) To recover contaminants

PAST EXPERIENCE WITH THE APPLICATION - has other scrubber / blower equipments used or tested ? if yes, please send us type & other details. Other equipments has been unsatisfactory due to-

- a) Corrosion
- b) Insufficient capacity
- c) Low efficiency (gas/dust separation/absorption)
- d) High initial cost
- e) Excessive maintenance
- f) Others

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