

VANE SCRUBBER DUST COLLECTOR

Design Features

- Medium efficiency of up to 95% in the 1 to 5-micron range.
- Tangential entry of the pre-cleaner section provided dust drop-out.
- No moving parts & low maintenance.
- Pressure plate design is critical for the efficiency.
- Gas capacities of 1 000 to 100 000 Am³/hr.

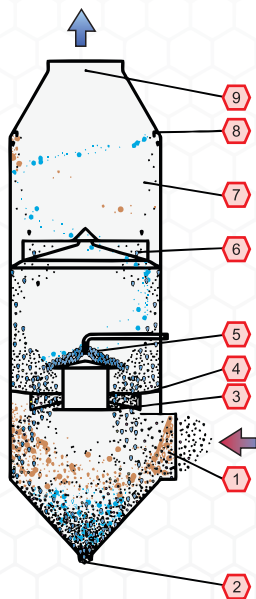


Figure 1. Vane Scrubber Operation

Legend

1. Bottom Inlet Section
2. Slurry Outlet
3. Pressure Plate
4. Scrubbing Vane
5. Liquor Inlet Nozzle
6. Eliminator Vane
7. Outlet Section
8. Anti-creep Ring
9. Scrubber Clean Gas Outlet

Operation

- Dirty Gas enters the inlet tangentially dropping out heavier dust particles.
- Water inlet is above the scrubbing vane top cone with a full cone spray.
- Slurry from the upper section wets the scrubbing vane where the second cleaning takes place.
- Cleaned gas and mist cyclonically moves toward the eliminator vane.
- Water droplets are removed from the clean gas.
- Clean gas discharges through the top outlet of the scrubber.
- Slurry discharge is through the bottom cone.

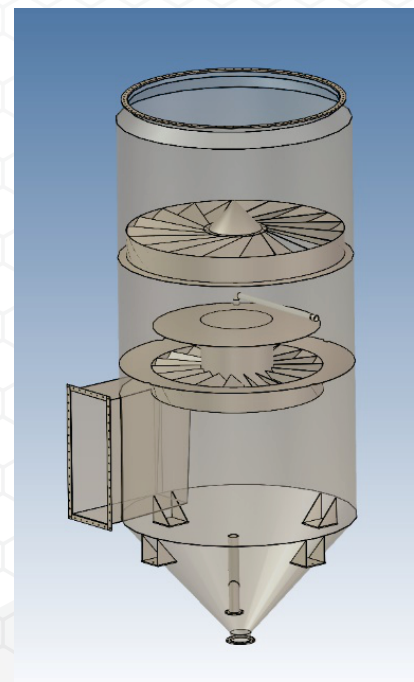


Figure 2. Vane Scrubber Exploded View

Benefits

- No moving parts and require minimal maintenance.
- Most of the dust is separated in the inlet section and only final cleaning in the scrubber.
- Pressure loss over the scrubber could be between 1,5 to 3,75 kPa depending on application.
- Material of construction to suit application.
- Small footprint & can be assembled in the workshop to reduce installation time & cost.
- 30 to 35 tph Steam Boiler applications

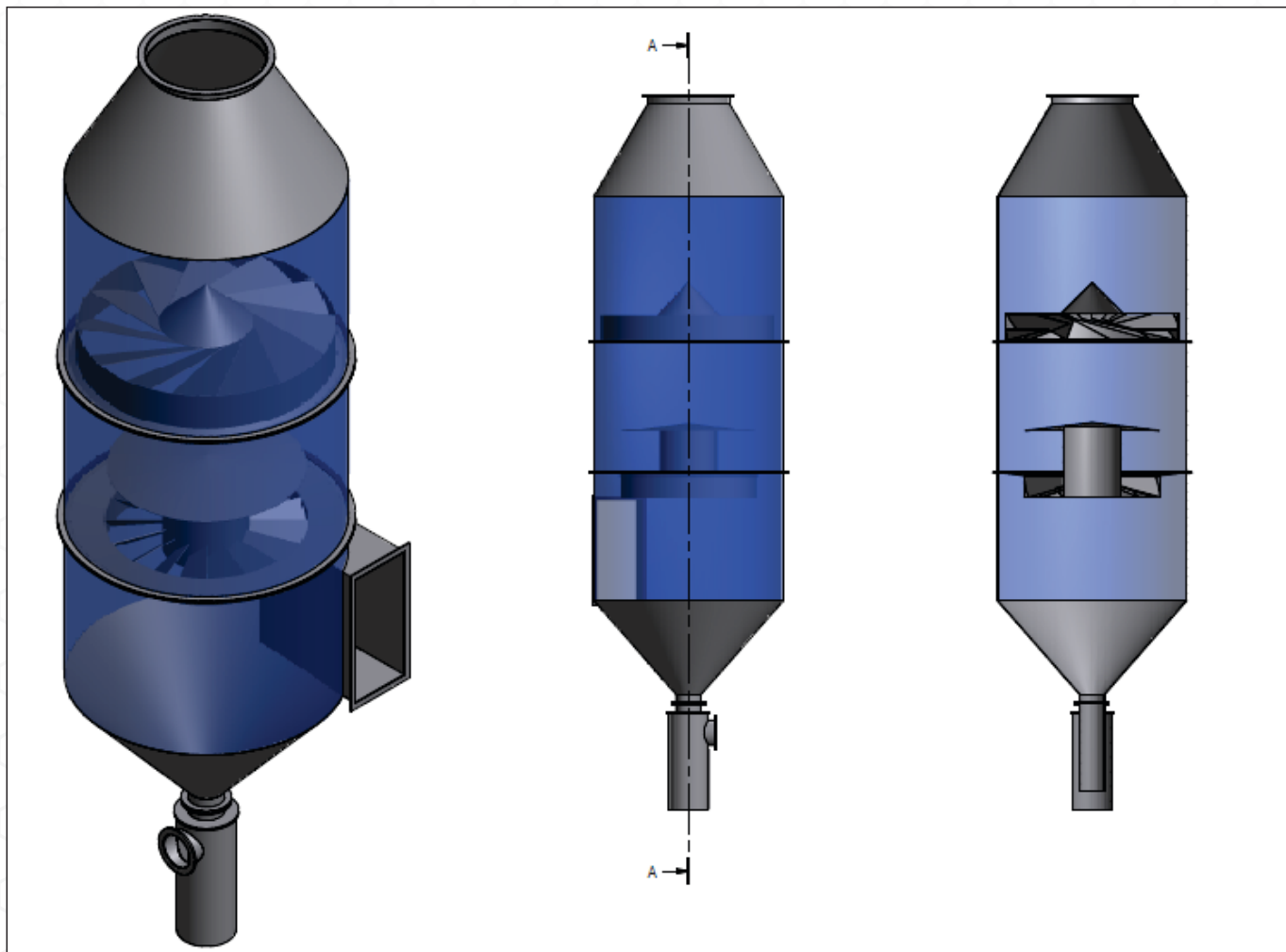


Figure 3. Vane Scrubber