# WET SCRUBBER

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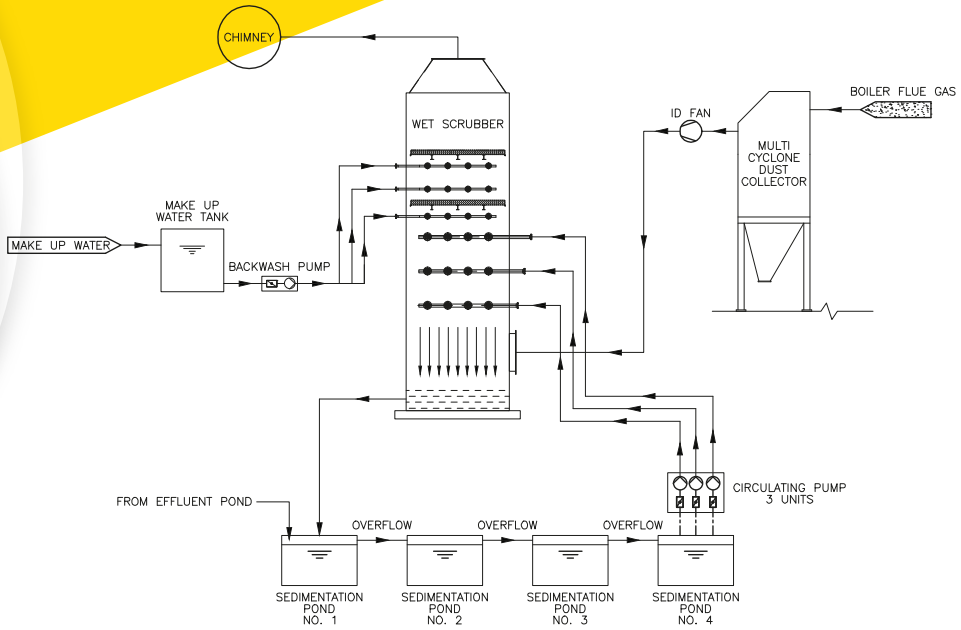


## System Description

The wet scrubber system consists of the

- Vertical cylindrical spray compartment
- Circulating spray pump set
- Sedimentation pond

## Equipment Component

1) The main spray compartment is a multi-layered material vertical cylindrical shell
   a. Inner layer is of material with smooth finishing and is able to withstand high temperature, corrosion and abrasion.
   b. Center layer is a high temperature, high strength acid / alkaline neutral material.
   c. Outer layer is the steel casing.
2) Multiple swirl vane plate and spray nozzles are strategically located inside the compartment.
3) Back wash spray system for self cleaning.
4) Gas entrance and exit connections are located at the bottom and top section of the compartment respectively. Access manholes are provided for maintenance work.
5) Water circulating pumps and backwash pump and make up water tank are included in the system.
6) The sedimentation pond is a compartmentalized reinforced concrete (RC) structure, to be constructed by end user.

## How it works

1) Dust laden flue gas is directed to the lower section of the spray compartment where it will then pass through swirl vane plane causing the gas to swirl upwards inside the cylindrical compartment.
2) Spiral nozzles provide cone shape water film spray against the gas flow. The counter flow of the water film provides the scrubbing action on the dust laden gas.
3) The dust trapped by the water and flows down the compartment to the discharge nozzle and the bottom. Clean gas flow out at the top of the compartment.
4) The dust together with the water is pumped to a sedimentation pond. Dust is then removed from the pond while clean water is recycled back to the spray compartment.
5) The wet scrubber system only works together with a multi-cyclone dust arrestor installed upfront.

## Technical data

| | |
|---|---|
| Final dust emission concentration | : ≤ 150 mg/Nm$^3$ |
| Inlet dust concentration | : ≤ 400 mg/Nm$^3$ |
| Pressure drop across | : ≤ 1,200 Pa (4.8" WG) |
| Flue gas inlet temperature | : < 300 °C |
| Flue gas emission moisture content | : ≤ 8 % |


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