

Electrostatic Precipitators (ESP)
ESP For Tunnel/Underground Use
Bag Filters, eBF™
Ash Handling Systems

**A Global Leader
in Air Pollution Control**

- People & Technology keeping our planet sustainable...



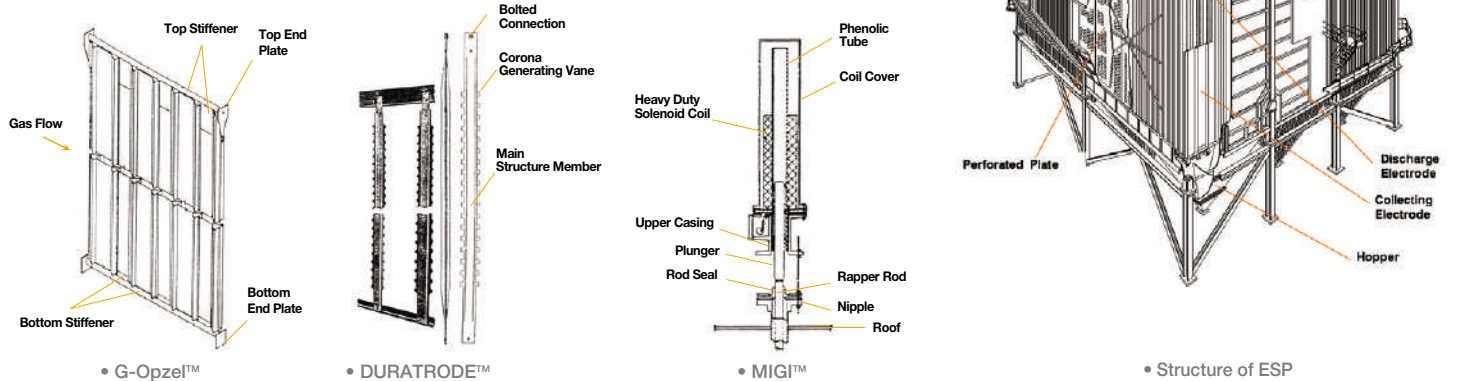
Electrostatic Precipitators (ESP)

1 Dry Type ESP

With an electrostatic precipitator (ESP), direct high voltage is applied to create a corona discharge to charge particles suspended in the gas and collect them through electrostatic attraction. An ESP is useful in removing particles in the sub-micron (0.1 μ m) range which are difficult to capture with gravitational or centrifugal force.

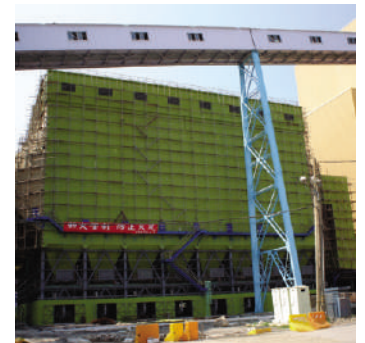
Advantages

- Customized system design
- Collection with G-Opzel™ Plate
- DURATRODE™ discharge electrode
- MIGI™ (Magnetic Impulse Gravity impact) rappers
- Semipulse and Multipulse for high collection and energy efficiency



Projects

- Boryeong Thermal Power Plant Units 1~8 500MW, Korea (1983~2006)
- Kasima Power Plant, Japan (2000)
- Taean Thermal Power Plant Units 7~8 500MW X 4, Korea (2004)
- Taichung Thermal Power Plant Units 9~10 550MW X 2, Taiwan (2001)
- Pohang Sintering Plants 1~4 (POSCO), Korea (1986~2008)
- Gwangyang Ferronickel Plant (POSCO), Korea (2007)



• Taichung Steam Power Units 9, 10 ESP



• Boryeong Thermal Power Plant Units 1~8



• Kasima Power Plant



• Taean Thermal Power Plant Units 7~ 8

2 Wet Type ESP

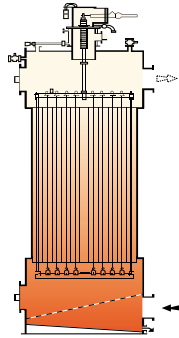
Wet type ESPs have many similarities with dry type units in terms of principle and design.

However, a basic difference is that the wet type is used in environments where the gas temperature is at or below dew point. Also, the rapping gear associated with dry units is replaced by an intermittent washdown system using water or other liquids to remove deposits from the collecting plate.

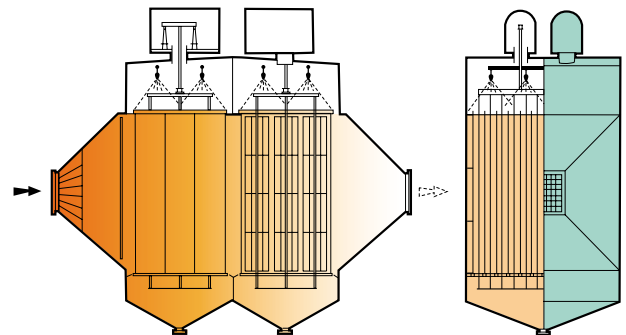
Wet type ESPs collect particulates that are sticky or suspended in the flue gas close to saturation temperature. It can also capture high resistance particulates and substances in a gaseous state. Two standard models of wet type ESP are available: Honey Comb Type (vertical flow) and G-Opzel Type (horizontal flow).

Advantages

- Low particulate emission
- Excellent collection efficiency for high resistance dust and mist
- Effective water film design
- Multiple designs of discharge electrode
- Comprehensive waste water treatment



• Wet Type Vertical Flow ESP



• Wet Type Horizontal Flow ESP

Projects

- Gwangyang MiniMill 2, POSCO, Korea (1997)
- STS 3rd Steel Plant (TCM), POSCO, Korea (2001)
- Pohang TLC Slag Treatment System, POSCO, Korea (2002)
- Gwangyang Continuous Casting Plants 1~2, POSCO, Korea (2003)



3 De-Tar ESP

This device also removes tar from the coke oven with a byproduct recovery system used in high temperature carbonization.

Projects

- Gwangyang Continues Galvanizing Lines 5~6, POSCO, Korea (2004)





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