

## WASTEGONE Eco Decomposition System



## INCINERATOR

- Self sustaining; no electricity or fuel is required
- Produces the resources eco friendly ash and bio-sludge
- No additional equipment is required
- Oxy-Ion Magnetic Decomposition
- Operates at a safe temperature
- Any layman can operate the installation
- Maintenance costs are very low
- Processes any kind of municipal solid waste
- Comparatively low capital expenditure
- Due to the controlled oxygen in flow technology the dioxins and furan levels in the emission are very low
- Dioxins and furans are well within the norm

- The eco friendly ash can be used as an ingredient of concrete, tiles and bricks.
- Running costs are negligible
- Can be decentralized accordingly
- Can be relocated easily
- Minimum lifespan is 15 years
- Can run continuously for days
- Requires considerable less space
- Odour and noise free

- Powered by electricity, kerosene or any other type of fuel
- Produces only burnt ash (fly & bottom ash)
- Secondary combustion system is required
- Flame combustion
- Operates at very high temperatures
- Requires trained technicians to operate
- Very high maintenance level
- Can be used for dry waste only
- High capital expenditure
- Dioxins levels in emissions are very high
- Health effects of dioxin and furan emissions from old incinerators continue to be a problem
- Highly toxic fly ash must be disposed of safely
- Very high running costs
- Needs a centralized approach
- Incinerator plants are immovable
- Life of incinerator deteriorates after 10 years
- Can not run continuously as maintenance is required
- Space required is considerable
- Generates odour and noise







# PYROLYSIS

- Energy generation doesn't depend on the calorific value of the waste
- Almost any type of solid waste can generate electricity
- Energy generation is consistent and very efficient
- Energy can be generated with any waste volume
- Segregation of waste is not required
- No energy required to run the installation
- Adopts Oxy-Ion Magnetic Decomposition
  technology; operates without flame combustion
- Operates at relatively low temperatures
- Self sustaining system no looping
- Requires limited space
- The results are constant and feasible
- Limited maintenance
- Operational costs are low
- Requires minimal supporting operations, staffing and machineries
- Minimal wear and tear
- Zero emission, all the dioxins and furans are killed within the system
- Short term returns feasible
- Relatively low capital expenditure
- Odour and noise free
- Easy to relocate, allows decentral approach

- Energy generation depends on the calorific value of the waste
- Not all types of solid waste can generate electricity
- Energy generation capability depends on type of pyrolysis (slow versus flash or fast)
- Specific waste volume required
- Segregating of waste is required
- Additional power is necessary to run the plant
- Adopts endothermic process; needs to absorb a large amount of heat
- Temperature required depends on type of pyrolysis
- System is not self sustaining
- Space required for the plant is considerable
- Results depend on type of pyrolysis
- Frequent maintenance of the plant is required
- Operational costs are higher
- Requires more supporting operations, staffing and machineries
- More wear and tear
- Emissions from plant include heavy metals, dioxins and furans
- Short term returns depend on type of pyrolysis
- Capital expenditure depends on type of pyrolysis
- Generates odour and noise
- Central approach required due to permanent character



### WASTEGONE Eco Decomposition System



# WASTE TO ENERGY

- Energy generation doesn't depend on the calorific value of the waste
- Any type of waste can generate electricity
- Energy generation is consistent and very efficient
- Energy can be generated with any volume
- Segregation is not required
- Additional fuel is not required
- Adopts Oxy-Ion Magnetic Decomposition technology
- Operates at relatively low temperatures
- No fuel is required to run the system
- Self sustaining system no looping
- Operates without flame and fire combustion
- · Zero variability on any type of waste and weather
- Space required is minimal
- The results are constant and feasible
- Maintenance of the plant is relatively low
- Operational costs are low
- Doesn't require supporting operations, staffing and machineries
- Minimal wear and tear
- Zero emission, all the dioxins and furans are killed within the system
- Relatively short term returns are possible due to definite results
- Relatively low capital expenditure
- Odour and noise free

- Energy generation depends on the calorific value of the waste
- Not all types of waste can generate electricity
- Energy generation is not consistent and less efficient
- Minimum 500 MT OF MSW is needed
- Segregating the waste in terms of higher calorific value is a challenge
- Additional fuel or electricity is necessary to run the plant
- Adopts combustion technology for decomposition
- Operated at very high temperature
- Fuel is required to run the system
- System is not self sustaining
- Operates with flame and fire combustion
- Output varies based on type of waste and weather
- Space required for the plant is considerable
- Due to the low calorific value the results are not constant and uncertain
- Maintenance of the plant is extensively high
- Operational costs are very high
- Requires supporting operations, staffing machineries
- More wear and tear
- Emissions from plant include heavy metals dioxins and furans
- Lack of short term returns due to uncertain results
- High capital expenditure
- Generates odour and noise