# Presentation on SWATCH (Smart Garbage Decomposition Machine)

#### Specially Designed for COVID-19 Waste & MSW



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### Swatch: The 'Soul'

# 6000 mm 15000 mm (SWATCH) 7000 mm Specially Designed for COVID-19 Waste and **MSW**



Aizwal, Mizoram - Installation



#### Swatch: Treatable Waste'

	Kind	Description of Items	
1	Covid-19 Waste	PPE, Surgical/Non Surgical Gloves, Masks, Shoe Covers, Face Shields, Goggles, Fluid empty Bottles, COVID food Waste, Poly Bags, Cotton, Bandages, Syringes, Sanitary Pads, Tissues Papers, Cloths, All kind of rubber items, Wood, Plastic cups and paper plates	
2	Household/Organic Waste	Kitchen waste, Vegetables, Flowers, Leaves, Fruits	

#### Note: Above mentioned wastes when mixed is most ideal for effective decomposition





Perfect Fit	Perfect Protection	Ensures Quality
with Non Woven Fabric &	Impermeable to	Follows all quality
free size to fit to all	blood and body fluid	compliant/standards





### Salient Features of SWATCH

- Most ideal for COVID-19 Waste & Municipal Solid Waste.
- Unique and distinct garbage Decomposition / Destruction Equipment
- Dispose off the Garbage in a scientific way without consuming power or fossil fuel. Only 3KW power is required to clean exhaust air.
- Decompose any type of waste other than glass and metals.
- Special Air space filled with super-strong magnetic and hyperthermia(300-450C)
- Very less space is required approx 1000-1500 Sq. feet
- Air emissions well below MoEF & CPCB norms



Aizwal, Mizoram - Installation

Bangalore, Karnataka - Installation





#### Salient Features of SWATCH

- Patented Technology
- Closed chamber Destruction/Decomposition with plasma and ionization techniques
- Concentrated Magnetic Action Technology
- No segregation is required. All kind of mixed waste can be directly fed into the system including COVID-19 Waste as well Municipal Solid Waste
- No residue except ceramic ash is generated which is non toxic and neutral in nature. With 1 ton of waste the final residue is left is approx.3 kg ash which can be either sent to brick kiln or land fill.
- Practically no operation and Maintenance other than Manpower as there are no moving parts. The life of the plant is minimum 20 years
- Significant saving of transportation cost of handling municipal waste from primary/secondary source to landfill



## Swatch: Technology & Principle

- Waste matter under minimum extreme condition become atom from molecule.
- Adding magnetized air and heat into atom condition, it is possible to separate electron from atom(separation).
- Generates "special space" of plasma condition.
- Reaction is induced by exothermic phenomenon.
- Thermal condition around 200°C is needed to accelerate the reaction which in turn increases to 300~500°C by oscillation of atoms and electrons in the molecular composition of matter
- Waste turns into ash which is non reactive.



• ZERO FUEL is required

for waste

decomposition



100 ton/day

Multiple Capacity ( 24 hours) : •2 ton •5 ton •10 ton •100 ton



<>850 Celsius

Depending on type of waste , the temperature has been captured between 350 to 850degrees



Material

CAN •MSW such as paper , plastic , packaging ,food , landscaping waste, CANNOT •Cannot decompose metals, solid , ceramics , glasses



## Swatch Vs Incinerators

SWATCH	INCINERATORS/present day SWM
<b>ENERGY</b> Saving Self Powered , No Power Consumption for Garbage Disposal	Incinerators uses <b>Electricity or Fuel</b> for Garbage Disposal
Processed at low Temp ( 350C to 500C)	Processed at Temp above 800 deg C
Magnetic Heat Decomposition Method	Incinerator uses Flame Combustion
Bi-Product as Ash	Incinerator Bi-Product is Ash
DECENTRALIZED No LANDFILLS!! Absence of Contamination and disposition	Lifting & Transfer of garbage to dump yard is required
No Processing and Storage is required	Processing of waste is required
No Segregation	Requires Land fill
Total Scientific approach of Garbage disposal	Not a Scientific method of Garbage disposal
No Odour, Flies, Leaching of Contaminants etc.,	Odour, Flies, Leaching of Contaminants etc.,















## **Swatch: Emission Measurement**

#### **Emission Measurement of Swatch Plasma**

Item	Unit	Result	Indian Regulation
Carbon Monoxide (CO)	mg/Nm3	88	<100
Carbon Dioxide (Co2)		9%	*
Oxygen (02)	•	10%	•
Nitrogen Oxide (NOX)	mg/Nm3	108	<400
Sulphur Dioxide (SO2)	mg/Nm3	35	<200
Dioxin	ng ITEQ/Nm3	0.08	0.1
Particulate Matter	mg/Nm3	18	50





# Swatch







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