



**TeslaGREEN™ INC.**

# **Tesla ENERGY BLACKHOLE**

## **Waste Disposal Machine**

### **TECHNICAL PROPOSAL of Self-Powered Waste Disposal Machine For the Capacity of 225 Tons/Day at Single Transfers Station. Total 2 Stations to Dispose 450 Tones/Day**

SEPTEMBER, 2016



## Executive Summary of BlackHole WDM

Our new and pattern technology called **BLACKHOLE** is a unique **Magnetic Heat Technology** based on garbage **Decomposition method**.

The system is a revolutionary equipment is a self-powered, Non-Combustion type which uses the Thermal Heat De-composition (THD) method using Magnetic energy at low temperature around 350 to 650 Deg C to decompose any Organic, municipal solid wastes without using any Electricity or fuel, which has been developed and enhanced by using patented technology from the USA.

BlackHole WDM adopts the unique patented Concentrated Magnetic Action (CMA) Technology from USA where the solid waste are disposed scientifically by the method of in-taking a little atmospheric air through strong magnets without using any power/fuel to Destruct/Dispose the waste by magnetic heat decomposition method.

On the other hand, the chamber temperature is regenerated to dry the input waste by which it increases the volume of waste destruction.

Its main features are.,

- **No Electricity or Oil/Fuel required(Magnetic Heat Technology)**
- **No Smoke & No Odour** (No Carbon or Toxin on released Gasses)
- **No Land filling.** (No need of hug lands to fill the garbage and also avoid primary and secondary transportations)
- **Mass Reduction Method.** (Reduces the volume of garbage in the ratio of 1/200-1/300)
- **No need of Segregation.** (if needed it can avoid segregation and feed Solid Municipal Waste directly in BlackHole WDM)
- **Low Cost & less running and maintenance cost.**
- **Mobility**-It can be de-centralized and very compact and easy for mobility.



**TeslaGREEN™ INC.**

**Corporate Office:** WYNNEWOOD, USA  
**Main Office:** Bangalore  
**Branch Office:** Cuddalore, Tamil Nadu



## BLACKHOLE Waste Disposal Machine Picture



### 1.1 About BlackHole(Waste Disposal Machine)

A Unique and distinct garbage Decomposition/Destruction Equipment.  
Developed & promoted at Bangalore under USA Patented Technology.  
Special air space filled with super-strong magnetic and hyperthermia (300-650C).  
Dispose of the Garbage in a scientific way without consuming power or fossil fuel  
Decompose any type of Organic waste.



Ability to reduce the volume of disposed Garbage by a ratio of 1/200 to 1/300 times.  
Bi-Product is a small volume of normal Ash. which can be taken to landfills (or) for improving Soil amendment and as a disinfectant.  
Speed of decomposition depends on moisture content of the waste. Lesser the moisture faster is the process.

## 1.2 Features & Highlight of BlackHole

**PATENTED TECHNOLOGY.** BlackHole WDM is USA Technology, Design and Process System is patented in India and in 33 other countries.

**THD METHOD.** Operates in low temperature Thermal Heat Decomposition (THD) method.

**CMA TECHNOLOGY.** Functions on a Concentrated Magnetic Action (CMA) technology.

**PROCESS AT PLASMA STATE.** After initial start-up fire, destruction starts slowly by splitting the molecules into atoms These atoms further ionized as electron, proton and neutron and this state is called as “Plasma State”

**SMALL FOOTPRINT.** A small floor space depending on the system size sufficient to accommodate system anywhere close to source.

**QUICK & FAST.** Decomposition of waste takes place at a faster rate in 8 hours period for single badge load.

**SELF POWERED, NO FUEL, NO BURNING,** neither electricity nor fossil fuel used for closed chamber Destruction/Decomposition.

**NO SEGREGATION.** Mixed Solid Waste (MSW) containing mixer of both dry and wet waste generated from households are suitable

**DECOMPOSITION AT SOURCE.** De-Centralized and Scientific method of Disposal which avoids Costly logistics to transport the waste to landfills.

**USER FRIENDLY** simple operation and easy to load, MSW garbage bags can be loaded 2-3 times a day as such collected from households.

**MOISTURE CONTENT** of the MSW is recommended to be less for optimum decomposition .No liquids in food waste are acceptable which will harm the speed of decomposition process.

**NO POLLUTION, NO FLAMES, NO DIOXINS.** Does not produce any flames, thus generating dioxins and other poisonous gases are eliminated, even when plastics and PVC are processed.

**MASSIVE VOLUME REDUCTION.** Reduces the output by more than 90% of the input waste.

**BY PRODUCT** - Small volume of normal Ash which can be taken to landfills (or) for improving Soil amendment and as a disinfectant.



**CAN'T DECOMPOSE** such inorganic substances such as glasses, metal, sand, soil, ceramics etc.,

**OPERATIONAL STANDARDS** are compatible to the norms and standards set by the Pollution Control Boards (PCB).

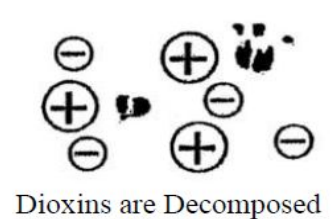
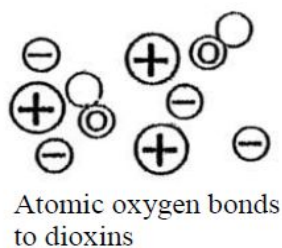
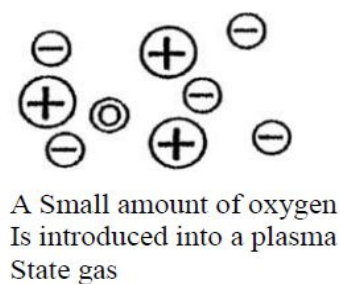
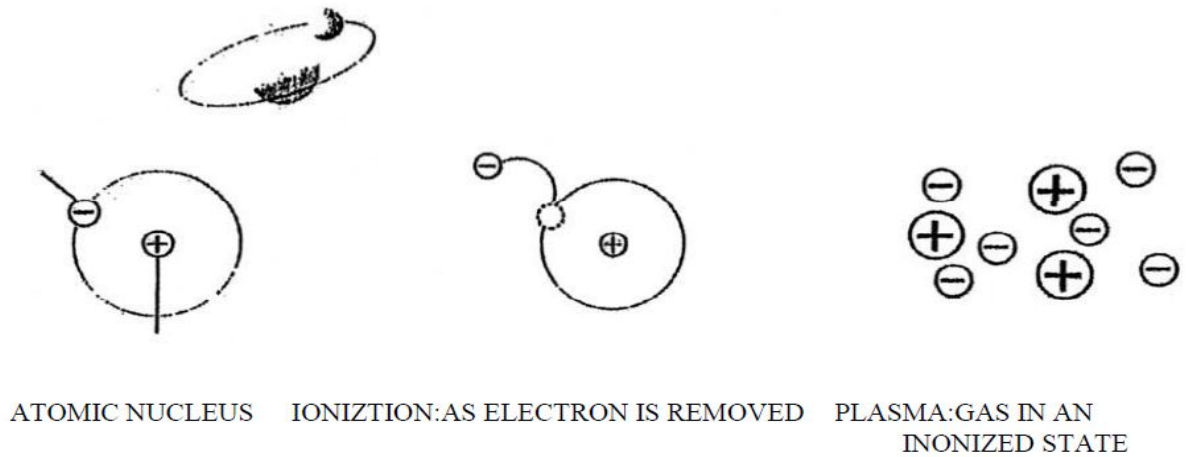
**CERAMIC** rich refractory coating compound containing high percentage (63%) Ceramic applied over inner walls of chamber to protect from corrosion and erosion.

**ECO FRIENDLY** - A total ECO FRIENDLY and 100% Environment compliance product

## 1.3 Theory of Plasma

Plasma (is an ionized gas, in which some electrons are removed from atoms and molecules and are free) is created by permanent magnets at high temperatures, 10-650°C. When a small amount of oxygen is absorbed into the plasma, highly reactive, negatively charged oxygen ions (Atoms and molecules that have lost electrons are positive ions (positively charged); electrons that have been removed are negative ions (negatively charged) are formed. This oxygen (negative ions) is highly oxidative, thus decomposing dioxins and other harmful compounds by oxidation.

ELECTRON





## 1.4 Working Principle

Closed chamber Destruction with plasma and ionization techniques at OXYGEN STARVED condition. The decomposition temperature is around 350 - 650 degree depends on the solid waste input. Do not require electric, other power or fuel for organic substances for decomposition

## 1.5 Process

Waste has to be feed into the chamber of equipment on uniform intervals. At the initial stage requires start up fire by using camphor/Dry wood afterwards destruction starts slowly by splitting the molecules into atoms. These atoms further ionized as electron, proton and neutron and this state is called as “plasma state” and separated electron change to “accelerated electron” with strong energy.

On the other side a small amount of atmospheric air is allowed to pass through strong magnetic field into

Oxygen starved chamber. During this operation oxygen molecule split into elemental oxygen with negative charge. This atomic oxygen is to oxidize perfectly organic surface and change organic matter to

Desperate organic oxide. Therefore reaction is induced by exothermic phenomenon; thermal condition around 200oC is needed to accelerate reaction which can achieve by initial decomposition.

From 200oC (by initial firing) to 350-650oC in the equipment by plasma, ionization and thermal Vibration will achieve.

The decomposition of waste takes place on bed wise so that heat energy developed may not be continuous. At the bottom of the destruction chamber a tubular type radiator which makes buried near the lower layer of deposited ash and ash will be separated. The waste heat is recovered through a tubular heat sink arranged near the upper layer of deposited ash of a hearth center section of said combustion chamber and said hearth periphery and the entire structure will have good heat transfer potential. The waste heat is recovered back and supply to the wet waste where the moisture content is reducing phenomenally



The non-combustible waste and ash (inorganic) is collected separately and stored in well-defined area for disposal into Secured landfill. The ash quantity generation should be in the ratio of 1/10.

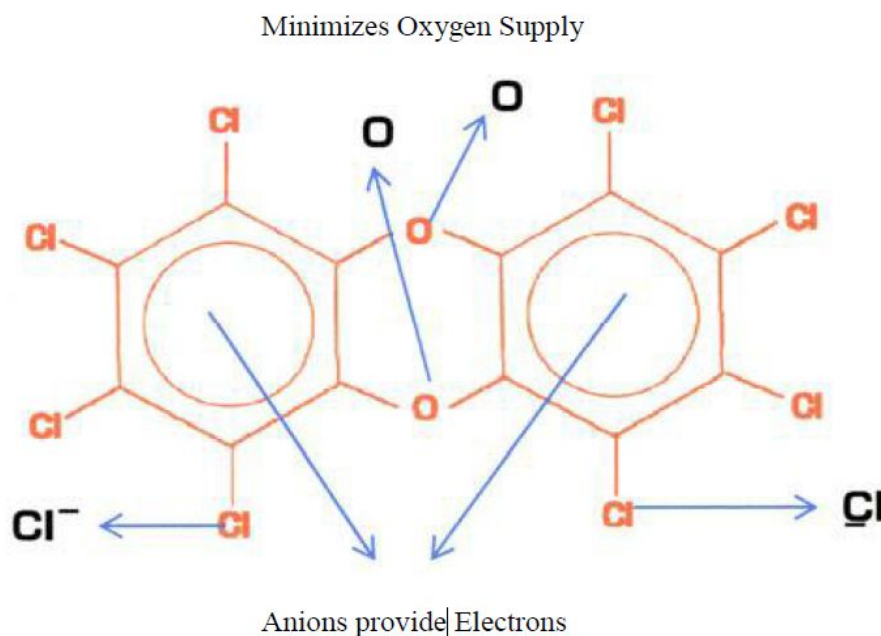
## 1.6 Why Dioxins is inhibited?

It has been suggested that one of the causes of dioxins in an incinerator is the retention of oxygen due to imperfect combustion and low processing temperature (10-650°C). Consequently, it became mandatory to process waste at high temperatures, at 800°C or higher, which requires installation of a secondary combustion system.

On the other hand, Decomposition system processes waste at low temperatures; however, the generation of dioxins is inhibited. Why...How?

The answer is because it hampers the bonding of two benzene rings with oxygen by minimizing the supply of oxygen.

The system also inhibits the benzene rings themselves from being produced by utilizing the effect of anions which are generated when the waste passes through the Special magnetic device and enters a chamber.



The Cl<sup>-</sup> that has jumped out then bonds with ions such as Na<sup>+</sup> to form a stable compound. Further, it effectively acts on NO<sub>x</sub> and SO<sub>x</sub>, inhibiting the generation of harmful chemicals.





## 1.7 Comparison with Incinerator

	BH	Incinerator
<b>Power</b>	Self-powered	Electricity/ Kerosene
<b>Temperature</b>	350C- 650 C	Over 800 C
<b>Method</b>	Magnetic Heat Decomposition	Flame Combustion
<b>Additional Equipment</b>	Basically NO Need	Secondary combustion system and filters
<b>By-Product</b>	Ceramic Ash	Ash

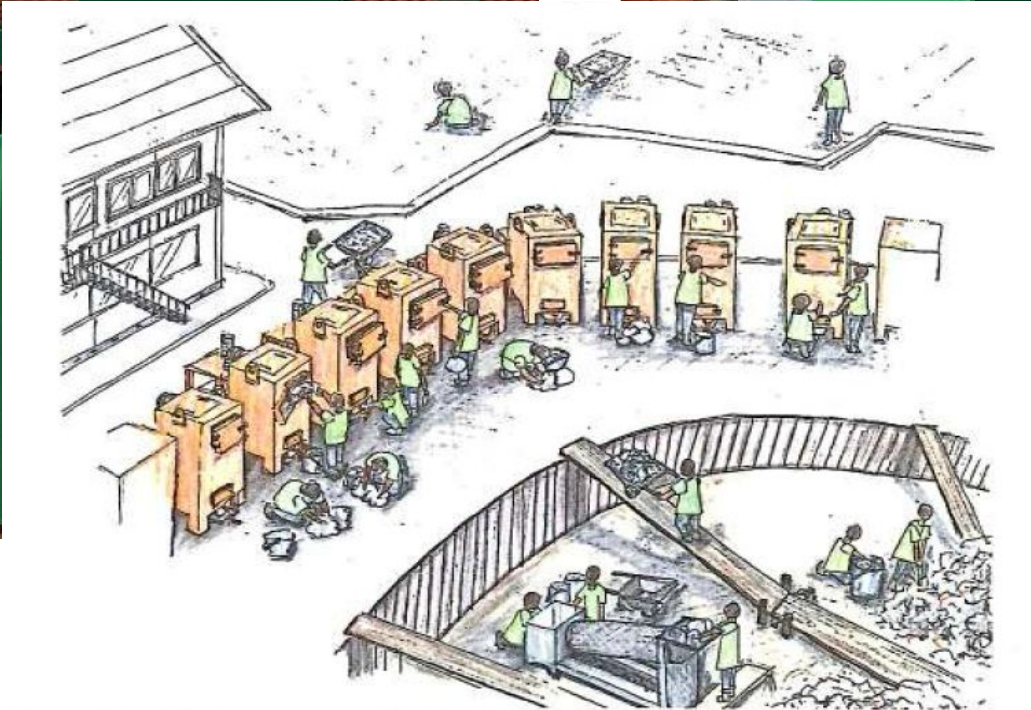


## 1.8 Photos and Models

### A. DeCentralized Areas Photos



Fig1. Gabage Disposal System at Minato-ku,Tokyo(0.5m<sup>3</sup> Type)  
-One of the initial introductions is possible to use it for the hospital waste) and the street.



## B. Centralized Areas Photos



## **ARRANGEMENT FOR 225 TON/DAY CAPACITY BLACKHOLE WASTE DISPOSAL MACHINES TOTAL**

<b>MACHINES REQUIRMENT:</b>	<b>20 Nos. of 10 Tons CAPACITY Machines with WET scrubber, Dryers and Conveyors.</b>  (The machines optimum output more than the specified capacity, respecting on maximum output we consider only 20 units of 10tons capacity machines for 225 tons/day Solid Municipal Waste for disposal.).  Consolidated Conveyor lines based feeding with pneumatic inlet systems, and appropriate dryer system to handle heavy moisture during the rainfall sessions.
<b>LAND/AREA REQUIRMENT:</b>	<b>11,617 Sq.M</b>  The machines occupancy approx.: 500 Sq.m Waste feeding conveyor belts occupy approx: 800 Sq.m By-productsASH storage occupy approx.: 317Sq.m Garbage storage and intake place approx.: 10,000 Sq.m
<b>SHULTER/PLOTFORM Reqmt:</b>	1600Sq.m Aluminium/Steel/Cement sheets roof shelter with appropriate side covering to protect machines and operation system.



Levelled floor with concrete based for machines and run the operation.

Require 3 phase Electric energy lines to operate conveyor belt, Dryer, Scrubber and lights during the operation. (No need of Electric or Any form of Energy for BlackHole WDM)

Complete systemized plumbing lines to clean and wash the work place, and run the wet scrubber during the operation.

**WASTE/GARBAGE Capacity: 225 Tons (Mix (Or) Segregated)**

**Output of By-Products will be**

**ASH 1.5 Tons to 2 tons**

**Bio Oil or Greasing Elements 200 to 500kg**

## TECHNICAL SPECIFICATIONS / SYSTEM DESCRIPTION OF BLACKHOLE WDM 10 Tons CAPACITY Machine

1. Model	BH- 21000
2. Capacity of the machine in KG	21.0m <sup>3</sup> equals to 10 ton to 12 ton
3. Material for disposal	Mixed Solid Waste (MSW)
4. Material Characteristics	Solid waste with less moisture. <b>AVOID WATERY/LIQUID MSW WASTE</b>
5. No of feeds	5-6 feeds/day - Conveyor feeds with pneumatic control inlet door system.
6. Temperature	350 - 650 Deg. Celsius
7. Type of system	MSW Decomposition System.
8. Area of operation	Non-flame proof
9. Material of Construction	M.S. Construction with Ceramic inlay
10. Safety Features	Pressure release valve, Pressure gauge installed



## REGULAR AND MANDATORY POINTS TO BE NOTED:

- A. **STABILISATION PERIOD:** Initially system required min. 1 week time to reach operational stability to obtain optimum output in performance.
- B. **OUR SCOPE:** Our Proposal for designing, engineering, manufacture, supply and installation of the items mentioned in the scope of supply.
- C. **EXCLUSIONS FROM OUR SCOPE:** Civil Works, Machine Operator labours and Any other items not mentioned in our scope of supply
- D. **CLIENT SHOULD PROVIDE:** Shelter in order to cover/avoid rain fall, Garbage storage place, and plastic bags or reusable bags locked [smell should not come out]. Water supply for hand washes cleaning premises purpose. Electrical Cabling & Accessories for 3 phase connection and lighting connection. And appropriate labours to handle the garbage.

Pollution Control Board [PCB] Application filing like COE (concern for Expansion/establishment) or COO (concern for operation).

Thanking You