



Earth Environment Network

Resource recovery system

EE21



EcoUSA
Effluents Technologies

www.EcoUSA.us

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EE21 Analysis Data

Exhausted gas analysis data

CO2 density analysis data(unit %)

exhausted gas temperature:20.1° C/weather:fine/atmosphere:1017hpa

EE21 Exhausted Density	0.036
Density in atmosphere of nature	0.03~0.04

Kureha Special Laboratory Co., Ltd.(analysis organization Minister of Health and Welfare specified)(May.19.2003)

Density of corbicula dust(Unit g/m³N)

EE21 Exhausted Density	0.001 Less than
Environmental standard value ※1	0.03~0.2

JAPAN ENVIRONMENT CO.,LTD(Dec.21. 2009)

※1 Dec.1999.the prime Minister' s office ministerial ordinanceNo.6
[Dioxin special measure enforcement rule]

Kureha Special Laboratory Co., Ltd(analysis organization Minister of Health and Welfare specified)(May.19.2003)

(Unit ng-TEQ /m³ N TEQ=toxicity equiponderance)
Dioxin analysis

EE21 Exhausted Density	0.00081 ※1
Environmental standard value ※2	0.1

JAPAN ENVIRONMENT CO., LTD(Dec.21. 2009)

※1 12% Oxygen density corresponding value

※2 Dec.1999.the prime Minister' s office ministerial ordinanceNo.6
[Dioxin special measure enforcement rule]

Resources recycling matter(Carbonized matter)analysis data

Dioxin analysis

(Unit ng-TEQ /m³ N TEQ=toxicity equiponderance)

Kitchen garbage※1	0.028
Waste plastics ※2	0.03
Incinerated ash ※3	3
Soil ※4	1

JAPAN ENVIRONMENT CO.,LTD (Sep.26.2009)

※1 garbage・plastics・corrugated card board etc. recycle household garbage which have been in great difficulties.

※2 Recycle waste plastic, mainly plastic bottle

※3 Notification No.36 Minister of Health and Welfare Judgment standard of dioxin about household garbage and under special control industrial waste.

※4 The Prime Minister' s office ministerial ordinance No.6. [Dioxin special measure enforcement rule]



Patent

[Resources recycling method and system・container]

International application No. PCT/JP03/08028

※candidate for 121 nations of world PTC affiliation(Patent is world' s first pioneering international patent)

	Apply No.	Patent No.
Japan	Special Application No.2004-524102	No. 4047331
Taiwan	Application No. 92119119	I-230101
Korea	No. 10-2004-7007588	No. 10-0572241
China	Application No. 03801355.X	No. ZL03801355.X
Hong Kong	Application No. 05104668.8	No. HK1071866
United States	No.10/483,853	No. US7,604,791 B2
Malaysia	No. PI20032795	
EPC	No.03736245.6(Germany・Italy・France・UK)	

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Developing a Resource Recovery and Recycl

The modern industrial age has produced a dangerous amount of toxic by-products, many of which we have been unable dispose of in a safe manner. This has resulted in an unprecedented assault on our global environment, reaching to the bottoms of our oceans and stressing our water resources and climate. Many of these toxic waste products have no satisfactory disposal methods available and may be considered to be permanent problems. We now offer the first large-scale answer to remediating these previously intractable problems with the introduction of the EE21 Resource Recovery System.

Example of setting up EE21 【Processing performance: 100t/ per day】



EE21 Resource recovery system

The EE21 is able to take any type of refuse or waste, reduce it to its constituent elements, recover those elements for re-use in new products (recycling), and do so with ZERO emissions. This means no CO2 or dioxins are produced in the reclamation process. The EE21 is not even equipped with an emissions stack and is 100% airtight and self-contained.

1 Since waste is not burned, there are no ventilation stacks

This total lack of CO2 emissions is an important development for the preservation of our planet and its climate.

4 Since the system is anaerobic and utilizes thermal cracking, there is no generation of dioxin or CO2.

The EE21 utilizes a thermal cracking system (also used in oil refineries) to safely break down toxic substances and gases. It does so in a 100% nitrogen atmosphere which results in NO CO2 or dioxins.

2 Because waste is recycled, final disposal dump is unnecessary

The EE21 converts waste into usable resources, thereby eliminating waste disposal sites. Valuable real estate can be utilized for more important uses and truck traffic greatly reduced.

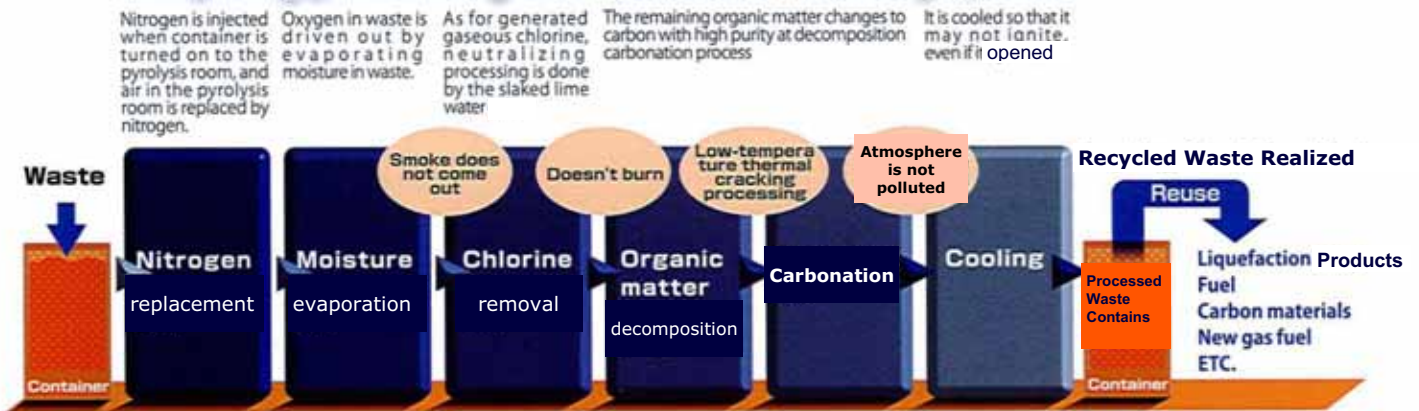
3 Realize zero emissions

Alternative fuels are realized because the EE21 converts plastics into type A fuel oil. This makes it possible for the EE21 to generate fuel for itself. Pure carbon is derived from organic wastes that can be used to enrich soil for farmers. The EE21 also has the unique and unprecedented ability to produce single or multi-layer carbon nano tubes at low cost and with zero byproducts.

5 Lack of CO2 Discharge

This total lack of CO2 emissions is an important development for the preservation of our planet and its climate.

Recycling process flow (thermal cracking system)



Usage

- Wastes, such as kitchen garbage
- Foods, manufactured residual substances (food, feed, tofulees, sakelees, etc.)
- Plastic
- Electric products (household electric appliances, personal computer, cellular phone, etc.)
- Textiles (clothing, bedding, carpet, etc.)

- Pachinko stand, Game machine
- Scrap wood (construction scrap wood, thinning material, bark, etc.)
- Automobile wastes (shredder dust, tire, etc.)
- Medical waste
- Sludge

※ Pretreatment maybe required and waste with a high content of liquefaction ingredients, and bulk specific gravity.

Processing Examples

