

Eco-services



1 Product-related services

(maintenance, upgrading, repair/reform)

2 Reuse and recycling services

(collection, etc.)

3 Outsourcing services

(waste disposal, control of hazardous items, chemical treatment, facility management)

4 Management-related services

(consulting, accreditation, analysis, evaluation, etc.)

5 Others

(e-commerce, eco-tourism, hotels, information transfer, etc.)

In the *Eco-products Directory 2010*, “eco-services” refer not only “technological improvements” but also “ways to use products” and “environmental management” as well as “mechanisms that enable environmental impact reduction through financial products.” Typical eco-services include vehicle sharing, where, for example, 10 people share one vehicle instead of each driving his/her own. This results in fewer vehicles on the road, thus reducing the environmental impact of travel considerably. As another example of eco-service, regular maintenance and upgrading can be performed on conventional products so that they can be used longer. In this directory, “eco-services” also refer to “eco-funds where investments are made in business firms with excellent performance in caring for the environment.”

The technological development of eco-products normally requires time and money. However, eco-services often only require good ideas to promote environmental impact reduction. Eco-services have not yet been widely recognized by consumers. A system should be developed to publicize the availability and advantages of eco-services so that they permeate society, encouraging further environmental impact reduction.

ES-1-001

Product-related

returnable container managing systems

NETLOOPASS : a system using IC-tags to manage returnable containers in logistics

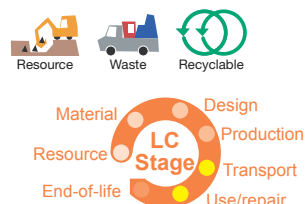
Environmental performance

From the perspective of consideration for the environment, returnable containers are frequently used for logistics between enterprises. However, there are many new problems related to management such as a lack of containers when shipping a product or an excess of containers. These problems are caused by an inability to determine the number of containers in inventory or their whereabouts. We have developed NETLOOPASS as an optimal solution to such problems.

Product performance

By attaching IC-tags to returnable containers such as folding containers and pallets, it is possible to prevent containers from being lost, retained or purchased in excess by managing when, where and in what quantity they are shipped or returned.

Customers can choose 13.56MHz (ISO15693 Standard) or UHF (EPC global Class 1 Generation 2 Standard) IC-tags and it is possible to use IC-tags even if the container is made of metal.



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ES-1-002

Product-related

recycling systems

Ecocement System

Environmental performance

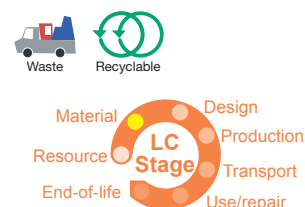
Ecocement is the recycling system for incineration residues from MSW incinerators. Such residues are utilized as the major raw material of Ecocement with minimum addition of natural resources.

Characteristics of Ecocement

1. This system ensures that dioxins contained in residues are safely decomposed during high temperature in excess of 1,350°C.
2. This system includes equipment that extracts and refines heavy metals contained in the incineration residues for recycling.
3. This system contributes to decrease of landfill burden.

Product performance

Ecocement is similar in quality to ordinary Portland cement. It is utilized to redy-mixed concrete, concrete product and soil stabilizer.



TAIHEIYO CEMENT CORPORATION

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Available in: Japan

Ecocement System

ES-1-003

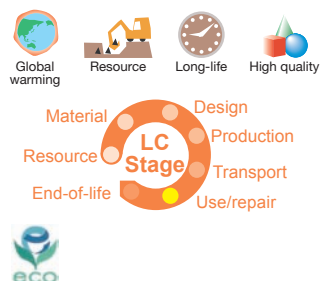
Product-related

treatment of metal surfaces

High-Performance Surface Treatment Technology "TRIBEC™" Series

Environmental performance

Various surface treatment technologies are applied to molds for extending their lives. Recently growing environmental awareness has resulted to change the type of lubricants along with other drastic modifications and has shortened the operating lifetime of molds. In an effort to improve their operating life, Hitachi Tool Engineering developed "the TRIBEC™ Series". By identifying the necessary performance attributes of each application based on an extensive analysis on mold abrasion over many years, Hitachi Tool Engineering has achieved high-performance surface treatment of molds that is operating-environment specific. "The TRIBEC™ Series" provides protection for molds used even in harsh conditions where environmentally conscious lubricating methods are used. In addition, mold abrasion can be suppressed with polishing to remove damaged portions and enables reuse of "TRIBEC™".



Hitachi Tool Engineering, Ltd.

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 URL <http://www.hitachi-tool.co.jp/e/products/index.html>
 URL <http://www.hitachi-tool.co.jp/e/environment/index.html>



Available in: Worldwide

Products with TRIBEC™ applied

ES-1-004

Product-related

elevator refurbishment services

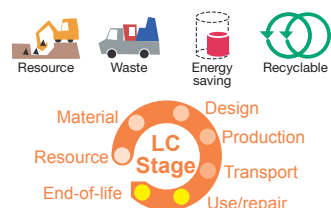
Quick Elevator Refurbishment Thanks to Addition of New Control Panel

Environmental performance

- Mitigation of climate change: Reduction in power consumption due to the change from conventional AC feedback control to inverter control.
- Efficient use of resources: Possible to perform refurbishment work without removing the existing motor, hoist, car, and platform facilities. Elimination of unnecessary replacement for the efficient utilization of existing resources.

Product performance

- Short work period: Reduced time required for transport and replacement work because of the division of the control panel into compact units.
- Reduced frequency of trouble: Change from a relay system to a microcomputer controlled system brings enhanced reliability as there are fewer replacement parts.
- Remote surveillance: Remote surveillance for 24 hours x 365 days.



TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

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 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www2.toshiba-elevator.co.jp/elv/infoeng/index.jsp>



Available in: Japan

Elevator Control Board Refurbishment CV260RN

ES-1-005

Product-related

precision measuring machines and instruments

Outdoor Measurement

Environmental performance

To make a preliminary assessment of the ability of the module to withstand exposure to outdoor conditions and to reveal any synergistic degradation effects which may not be detected by laboratory tests.

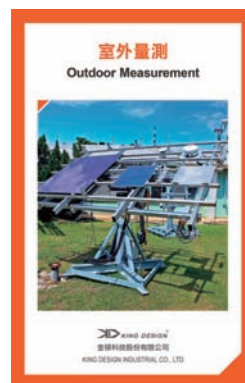
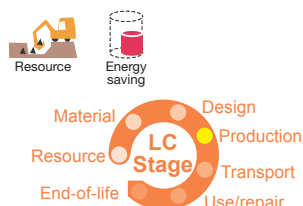
Product performance

1. Hardware devices precise, stable, reliable, with annual calibration
2. Measurement data conform to IEC 60904-1
3. Reference module conform to IEC 60904-2, inside with temp sensor
4. Data auto measurement and analysis against weather data
5. Correct parameter Voc, Isc, Pmax, Temp.

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ES-1-006

Product-related

precision measuring machines and instruments

UV Preconditioning Test

Environmental performance

To precondition the module with ultra-violet (UV) radiation before the thermal cycle/humidity freeze tests to identify those materials and adhesive bonds that are susceptible to UV degradation.

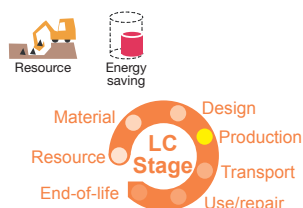
Product performance

1. The device conform to IEC61215, IEC61646 equipments.
2. Got 1st tier maker and National PV test laboratory equipped.
3. Low maintenance cost and limit space demand.
4. With fluorescent lamp without O3 concern.
5. Low power consumption and cost saving compare to metallic lamp.

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ES-1-007

Product-related

precision measuring machines and instruments

Hot Spot / Light Soaking

Environmental performance

Steady State Sun Simulator is using artificial light source and filter, simulate the natural light, controllable to meet IEC 61215 and IEC 61646 regulation, to perform light soaking requirement as per the regulation. The equipment is self regulated temperature control. Equipped with radiation sensor to control the light source for stability and timing control.

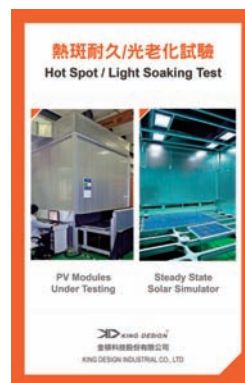
Product performance

1. King Design was name on IEC supplier list.
2. The device equipped at National PV test laboratories and tier one customers.
3. System cooling by air, low power consumption, small space demand.
4. Low maintenance cost.

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ES-1-008

Product-related

precision measuring machines and instruments

Electric Auto PV Mover

Environmental performance

Capability of Loading : 1000kgs
Range of lift up : 5cm~200cm
Each suckers independent valve
Powered by : 1.5kw/24V DC automatic motor 180AH/24V battery

Product performance

1. The device fit various PV module, maximum 2.2x2.6M
2. Lift up angle from 0 to 90 degree
3. Fork lift rechargeable, none noise

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ES-1-009

Product-related

precision measuring machines and instruments

Hail Impact Test

Environmental performance

As a fact that solar panels or related equipment are placed under direct sunlight outdoors without shelter, they are vulnerable to the effects of climate change causing aging and damage; such as when under hail strike, solar panels or equipment are easy to be damaged from hail hits.. This tester can simulate the impact of hail falling onto your products; and you can adjust the products to facilitate them with the best quality and reliability in the market.

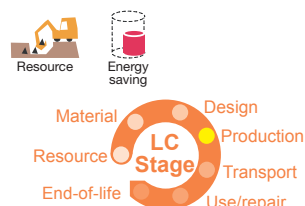
Product performance

1. Equipment complies with the IEC 61215:2005 Hail Test specification.
2. Air-fired hails, digital display, pressure adjustment, remote wire control.
3. Laser positioning instructions, X / Y axial adjustments.
4. Two-speed high-speed laser detection module, hail speed is 15 to 40m/sec.
5. The largest test size is 300x200cm, can be customized.

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ES-1-010

Product-related

precision measuring machines and instruments

Module Breakage Test

Environmental performance

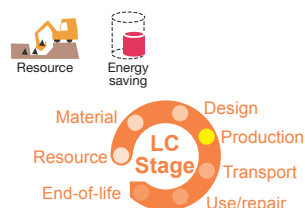
Providing confidence that cutting or piercing injuries can be minimized if the module is broken.

Product performance

1. Equipment conforms to IEC61730 MST32 specification
2. King Design was name on IEC supplier list.
3. The device equipped at National PV test laboratories and tier one customers.
4. Impactor without 2nd rebound by strong arm fix.
5. Impactor release by electrical hook.

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ES-1-011

Product-related

precision measuring machines and instruments

Robustness of Termination Test

Environmental performance

1. Cable test length is 450mm.
2. Pull the leading wire by 4.08kg in 170 o of angle.
3. X-axis: from 170o right swinging to 170o left.
4. Y-axis: from 170o up swinging to 170o down.
5. Z-axis: pull at 170 o and spin.

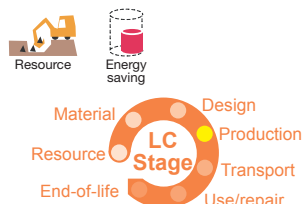
Product performance

1. Tester: 2080W (can be extended to 3070) x 2020Hmm aluminum rack: table surface is padded by slip-stop pad.
2. Air-electrical combination torque mechanism: pneumatic pump: 1hp; air pressure: 6kg/cm2; circuit & pneumatic control system.
3. Torque control system: left, right & front spinning motor; positioning and rotating arm.
4. Tension force corrector: pneumatic cylinder and torque meter.
5. Accept customized order.

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ES-1-012

Product-related

precision measuring machines and instruments

Temperature Circuit and Cold/Wet Test

Environmental performance

1. 10.4 inches TFT LCD, touch-type Chinese/English display controller.
2. Temperature/humidity setting procedure, LCD curve display device (set to "curve display").
3. Chinese/English/LCD operation/troubleshoot/guiding window.
4. State-of-the-art intelligent auto-dispatch "heat load value" coolant servo valve flowrate algorithm control.

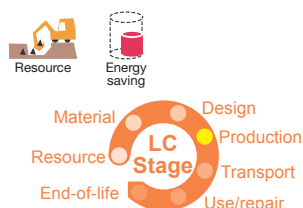
Product performance

1. Interior material: Stainless steel plate (SUS #304)
2. Exterior material: Baking finish steel plate
3. Insulation: Rigid polyurethane foam
4. Inspection window: A rectangle inspection window (W310*H380 mm)
5. Equipped with a fluorescent lamp and heat-generating glass guarantees an ideally clear view of the specimens during the testing operation.
6. Door: Double swing door with two sight windows and two handles
7. Heater: Naked wire heater
8. Circulator Fan: SIROCCO FAN and two motors

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ES-1-013

Product-related

precision measuring machines and instruments

Wet Leakage System

Environmental performance

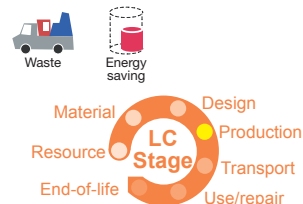
1. Water Tank frame
 - a. Water circulation system is at the bottom of the tank.
 - b. 180cm 1 inch PVC tube in length with the diameter of 5 mm hole.
 - c. Total of 18 holes along the two sides.
 - d. Circulation water with stainless steel filter.
 - e. One water outlet with diameter of 1 inch.
2. Temperature control System
 - a. With a pump of quarter HP, drainage at 60L min, outlet with a ball for speed control.
 - b. Water Inlet at the side of the tank, spreading with many holes for even water flow into the tank.
3. Rack for water logging from heavy rainfall.

Product performance

1. The tester complies with 10.15 of IEC 61215:25000, 10.15 of IEC 61646:2008, and Test Specification MST17 of IEC 61730:2004.
2. This tester can test solar equipment being damp or soaked in water; figuring out if the degraded power output t can meet the said specification or not.

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ES-1-014

Product-related

precision measuring machines and instruments

LED Sun Simulator System

Environmental performance

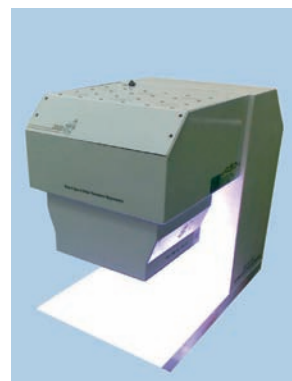
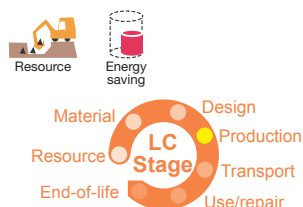
- 1.Low maintenance cost against xenon lamp
- 2.Low power consumption
- 3.LED lamp life 50 times long for xenon lamp
- 4.Spectrum adjustable
- 5.Irradiance range from 0 to 1000 W
- 6.More light and compact
- 7.System spec conform to IEC 60904-9

Product performance

LED Simulator System is using LED light source, configuration and light tunnel Integrate Rod, simulate the natural light, controllable to meet IEC 60904 regulation, to perform PV module test.

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ES-1-015

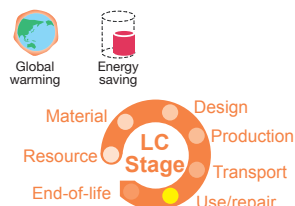
Product-related

air conditioners

Remote Energy Saving Tuning Service (for Building Air Conditioning)

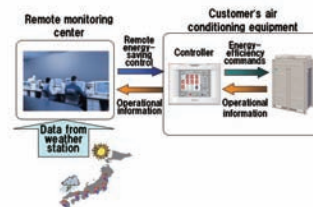
Environmental performance

This product provides remote energy saving control for the VRV series and helps customers reduce CO₂ emissions. The energy saving control for this service optimizes control so as to eliminate unnecessary use of air conditioners based on accumulated air conditioner operations data and weather information in the locality of the customer's facility. As a result, the system reduces the likelihood of impaired comfort levels by the air conditioner when compared to ordinary on-and-off control systems.



DAIKIN INDUSTRIES, LTD.

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 URL <http://www.daikin.com/csr>



ES-1-016

Product-related

cycle meter

emeters

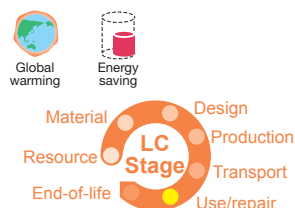
Environmental performance

By cyclometer "emeters" and cycling SNS "emeters web" consumer may become more consciously aware of eco - a part of daily life. "Emeters web" converts bicycle running distance to "eco point". It means CO₂ emitted from vehicle per each 4.3km is about 1kg* which is equivalent to 1 LEAF obtained by bicycle for the same distance. The amount of LEAF reflects contribution to global environment quantitatively.

*In case that fuel consumption of a vehicle is 10 km/L.

Product performance

Japan first cycling SNS "emeters web" is a service used together with cyclometer "emeters". Daily running distance and time, speed, accumulated distance, calories consumed can be measured and recorded by "emeters". User of this service may manage data obtained from "emeters", and also communicate with other registered user.



Bridgestone Cycle Co., Ltd.

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emeters

ES-1-017

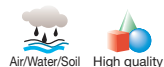
Product-related

sewer maintenance

Technology for Rehabilitation of Existing Sewers and Conduits without excavation which incorporates an unplasticized polyvinyl chloride and mortar grout

Environmental performance

- 1) Semi-permanent technology for reinforcing ageing sewers and conduits without excavation
 - The objective of this technology is to improve the performance of underground sewers whose strength has been degraded due to exfiltration because of partial or overall damage, infiltration, and ageing. Vinyl chloride materials are fixed on the inside surface of the sewer, and then mortar is grouted into the gaps between the existing sewer and the rehabilitated pipe to integrate the composite pipe



Refresh System

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 URL <http://www.refreshsystem.co.kr>



Available in: Republic of Korea

ES-1-018

Product-related

sewer maintenance

Technology for the full rehabilitation of sewers without excavation using a reverse-rotation system capable of rotating in either direction (left or right), utilizing both hydraulic pressure and pneumatic pressure

Environmental performance

- 1) Engineering technology for the full rehabilitation of sewers, with extensively improved reverse-rotation system; no excavation required
 - Rotation range of reverse-rotation system on both sides: 180°
 - Selective application of hydraulic force and pneumatic force
 - Localization of liner, and development of guide roller for preventing the liner (felt + film) from wrinkling (defect)
 - Cooling system employed in the multi-reverse rotation and reverse-rotation systems, thereby reducing the construction period, saving construction costs, and minimizing defects



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Available in: Republic of Korea

ES-1-019

Product-related

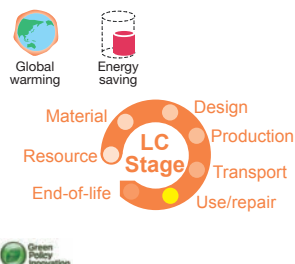
data processing services

SupportDesk Expert, administration service of IT resource

Environmental performance

This is the service which is based on the operation information of the device, and the service engineer who is in charge of client reports periodically the following items: power consumption / estimation of CO₂, number of printed sheets / temperature and humidity situation of the office room.

A collecting tool of the IT infrastructure operation (SDB: System Defender BOX) is installed, by which the operation state is grasped. From the result, the unnecessary power supply equipment is specified, and reduction of the power consumption is carried out.



Fujitsu Limited

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Available in: Japan

ES-1-020

Product-related

environmental services

Environmental Impact Assessment Services

Environmental performance

International financing institutions such as the World Bank Group and Export Credit Agencies have established environmental and social guidelines. The investors that have intention to raise fund from international financing institutions must comply with the guideline, as well as the host country's Environmental Impact Assessment system.

We provide various services on Environmental Impact Assessment, including advisory services for the preparation of Environmental Impact Assessment Report that satisfies the requirements of the guidelines.



E&E Solutions Inc.

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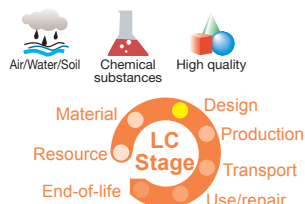
ES-1-021

**Product-related
environmental services**

National Environmental Information Services

Environmental performance

We provide most recent information on environment including laws, regulations, policies, technologies, market and other finely-tuned services to meet our clients needs, through our global network.



E&E Solutions Inc.

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ES-1-022

**Product-related
technical services**

Analytical services for the new energy and energy saving devices

Environmental performance

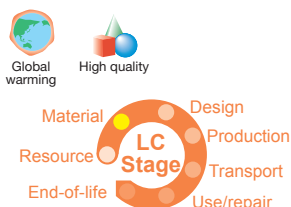
ITES expands the analytical and evaluation services for the energy saving devices; LED and OLED lighting and the new energy devices; PV cell and lithium ion battery. ITES contributes the Global warming prevention through the latest analytical technologies.

- (1) Reliability test and failure analysis for LED and OLED lightings
- (2) Reliability test and failure analysis for PV cell and module.
- (3) Construction and material analysis for lithium ion battery.

Product performance

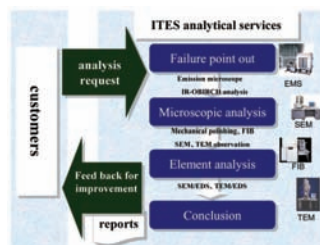
ITES advantages are the sample preparation and observation techniques in nanometer level, the proposal report based on the much experience and total solution system through reliability test to analysis. ITES provides three values by the technologies and facilities.

- (1) Quality : high quality analysis result
- (2) Delivery : short delivery time and on time operation
- (3) Value : useful proposal report for the customers



International Test & Engineering Services Co., Ltd.

800 Ichimiya, Yasu-shi, Shiga, 520-2392, Japan
URL <http://www.ites.co.jp/english/>
URL <http://www.ites.co.jp/english/analyze/index.html>



ES-1-023

Product-related

Industrial waste disposal business

Waste Management in Asia

Environmental performance

DOWA ECO-SYSTEM has gained the trust of our clients by balancing top-quality environmental efficacy and economic efficiency.

Modern Asia Environmental Holdings Inc.

P.T. Prasadha Pamunah Limbah Industri

DOWA ECO-SYSTEM CO., LTD.

14-1, Sotokanda 4-Chome, Japan
 Tel +81-3-6847-1230 Fax +81-3-6847-1241
 URL <http://www.dowa-eco.co.jp/en>
 URL <http://www.dowa-csr.jp/csr2009/html/en/index.html>

Available in: Japan, Asia, Southeast Asia, Indonesia, Singapore, Thailand, Tokyo Metropolitan Area



PT. Prasadha Pamunah Limbah Industri (PPLI)

ES-1-024

Product-related

car-sharing

Car-sharing

Environmental performance

"Car-sharing" is a membership-based car rental system in which numerous individuals share the use of several cars. Car-sharing is cost effective as customers pay a fee according to the duration of vehicle use and driving distance. The popularization of car-sharing is expected to reduce the total number of vehicles used by society as a whole, leading to fewer CO₂ emissions and less traffic congestion, among other benefits.

<Benefits of ORIX Car-sharing>

- Linking Car-sharing With Railway Transport

Reduction of CO₂ emissions will be achieved by using railway transport for a long distance travel and using a car-sharing vehicle from the point that is close to the destination.

- Facilitating "Eco Drive" with In-vehicle Car-sharing Device

Each ORIX Auto vehicle for car-sharing service carries an in-vehicle device which indicates "fuel consumption" and "CO₂ emission" on displays of car navigation systems after a drive. This is effective in promoting drivers' awareness of "Eco Drive" and helping to change their driving behaviors.

- Carbon Offset

CO₂ emissions of the car-sharing business have already been offset using carbon credits.



An electric vehicle for car-sharing

ORIX Auto Corporation

3-22-8 Shiba, Minato-ku, Tokyo, 105-8589, Japan
 Tel +81-3-6436-6000 Fax +81-3-6436-6901
 URL <http://www.orix.co.jp/auto/>
 URL <http://www.orix-carsharing.com/>
 URL <http://www.orix.co.jp/grp/co/environment/index.htm>

ES-1-025

Product-related
solar lighting systems

Solar Power Generation System Integration

Environmental performance

Solar power is the most promising renewable energy to emerge a low carbon society. With the progress of technology development and commercialization, solar power electricity is expected to get huge popularity in near future.

ORIX offers one-stop-shop service of solar power electric system ranging from system procurement to installation, maintenance and recycling. ORIX can offer whichever solar panels customers prefer of silicon crystal type or thin-film type due to the partnerships with plural panel manufacturers. Through the allied sales agents and building constructors network nationwide, it provides installation and maintenance of solar power electric system and promotes collection, reuse and recycling of unwanted solar panels.

ORIX Corporation

12-15, Nihonbashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan
Tel +81-3-6667-2263 Fax +81-3-3249-1987
URL <http://www.orix.co.jp/grp/>
URL http://www.orix.co.jp/grp/eco_orix.htm
URL <http://www.orix.co.jp/grp/co/environment/index.htm>



Solar panels installed on the roof of a condominium

ES-1-026

Product-related
consulting service

eco+waza Web -Japanese Sustainable Product Marketplace-

Environmental performance

ECOTWAZA is a Japanese Sustainable Product Marketplace, serving as a bridge between eco-friendly products and technologies of small and medium-sized companies in Japan and environmental-conscious businesses and individuals in the world. You can search for green items and companies from all over the country, each having different behind-scene stories, yet each living up to determination to become a part of solution for environmental issues and sharing a common cause for the greener sustainable Earth.

Product performance

Foreign merchandisers, product designers, importers and retailers are more than welcomed to contact us for further business opportunities with any of listed companies at our website.

Ecotwaza Co., Ltd.

1-6-12 Naka Kunitachi-shi, Tokyo, 186-0004, Japan
Tel +81-42-573-5613 Fax +81-42-573-5613
E-mail info@ecotwaza.com
URL <http://www.eco-friendly-japan.com/>



eco+waza Web to find Japanese sustainable products

Available in: Worldwide

ES-2-001

Reuse and recycling

retreaded tires

Retread tires for trucks and buses

Environmental performance

Through retreading method, the CO₂ emission and energy consumption during tire manufacturing process can be significantly reduced as well as scrap tire reduction.

Bridgestone also provides new tire with properly designed as retread casing in order to maximize the value of casing and reusing efficiency. Bridgestone will make continuous effort for further enlightenment of ECO concept.

Product performance

Retread is to assemble new tread rubber on worn-out tire and to revive tire life.

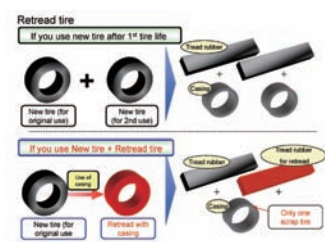
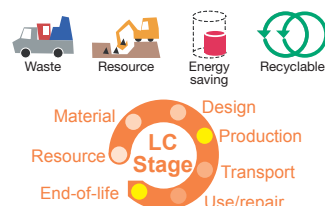
There are 2 ways of retread. One is the way that already cured tread (Pre-Cured Tread=PCT) is assembled on worn-out tire, which is called "COLD" type retread, because temperature on curing is relatively low (100-120°C). The other is the way that non-cured tread is assembled, which is called "HOT" type retread, because temperature on curing is relatively high (140-160°C) and this is similar to new tire production.

Bridgestone Corporation

10-1, Kyobashi 1-chome Chuo-ku, Tokyo, 104-8340, Japan

Tel +81-3-3563-6082 Fax +81-3-3563-1165

URL <http://www.bridgestone.co.jp/english/index.html>



Retread tires image

ES-2-002

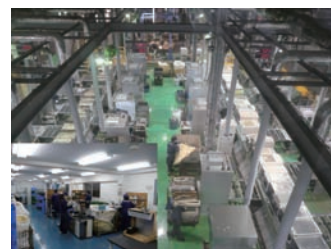
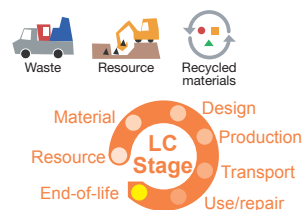
Reuse and recycling

recycling systems

Recycling of Electronic Appliances Toward Recycling-oriented Society

Environmental performance

Tokyo Eco Recycle Co., Ltd. disassembles used electric appliances manually to separate valuable resources thoroughly. One step forward from an effort just to "recover resources" for environmental protection to "create resources" has achieved a new business model. Tokyo Eco, a front-runner in the world has been striving to establish a novel approach representing the recycling industry. Tokyo-Eco strives for "zero emission", which means waste going to landfill sites be reduced to zero. Our landfill ratio approx. 0.1% is at the top level in Japan. At the same time, the information security is highly taken into account (e.g. being certified for "privacy marking") in order to promote recycling in the information society.



Tokyo Eco-Recycle, Ltd.

2-8-21 Wakasu, Koutou-ku, Tokyo, 136-0083, Japan

Tel +81-3-3522-6690 Fax +81-3-3522-6688

URL <http://www.tokyo-eco.co.jp>

Available in: Japan

PC recycle room, Line for washing machine and air-conditioner

ES-2-003

Reuse and recycling
recycling systems

"ECO CIRCLE" World's first totally closed-loop recycling system for polyester

Environmental performance

The closed-loop recycling system of ECOCIRCLE™

- will produce no waste
- will suppress petroleum consumption
- will significantly reduce CO₂ emissions and energy consumption

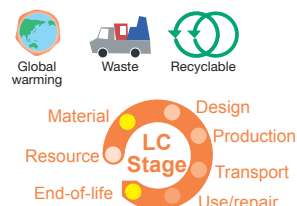
Product performance

ECOCIRCLE™ is an advanced system that turns polyester products back into highly pure polyester raw material (99.99%). By separating additives and coloring agents, purity equivalent to raw material produced from petroleum can be achieved.

ECOCIRCLE™ is a Teijin Fiber trademark.

Teijin Fibers Limited

11FL, KOWA Nishishinbashi bldg., 1-1, Nishishinbashi 2-chome, Minato-ku,
Tokyo, 105-0003, Japan
Tel 0088-22-0175
E-mail tfj0604@teijin.co.jp
URL http://www.ecocircle.jp/index_e.html



Closed-loop recycling system

ES-2-004

Reuse and recycling
recycling systems

Recycling service of beverage

Environmental performance

We are providing the recycling service of the beverage. There are a lot of restrictions to defend the value of food in Japan. The beverage also receives the restriction.

The large quantity of energy was consumed for the beverage had been burnt before this service was able to be done. However, it came to be able to do efficient recycling by this service.

We take out only the beverage of contents, and are manufacturing the biomass fuel.

Needless to say, the containers of the beverage of each material are recycled.



REVACS Corporation

2-1-16, Naruohama, Nishinomiya-city, Hyogo, 663-8142, Japan
Tel +81-798-47-7626 Fax +81-798-41-5680
E-mail csr@revacs.com
URL http://www.revacs.com/e_index.html



Drying plant

ES-2-005

Reuse and recycling
recycling systems

Ash Washing System

Environmental performance

Ash Washing System is a recycling system for incineration residues, otherwise known as soot & dust and bottom ash from MSW incineration, as a cement raw material. This system can be introduced at existing cement plants simply by installing pretreatment facilities of the Ash Washing system.

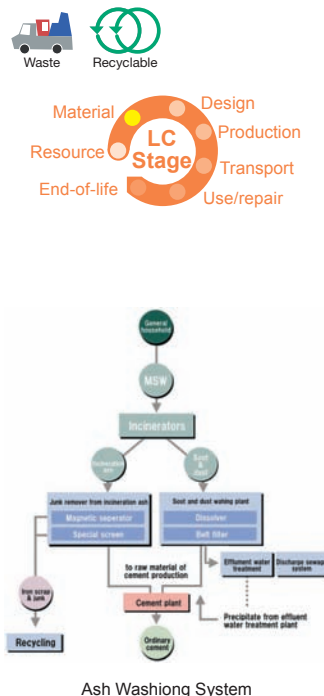
Characteristics of the Ash Washing System

1. Dioxins contained in the incineration residues are safely decomposed during the high temperature burning process at cement rotary kiln in excess of 1,450°C.
2. The pre-treatment of bottom ash requires only removing metals and screening other large foreign objects. Soot & dust includes many chlorides and need to be treated to remove them using water. Soot & dust and bottom ash are utilized as a cement raw material after pre-treatment

TAIHEIYO CEMENT CORPORATION

Daiba Garden City Building, 2-3-5, Daiba, Minato-ku, Tokyo, 135-8578, Japan
Tel +81-3-5531-7438 Fax +81-3-5531-7620
URL <http://www.taiheiyo-cement.co.jp>

Available in: Japan



ES-2-006

Reuse and recycling
recycling systems

AK System

Environmental performance

AK (Applied Kiln) System recycles household garbage into raw material and alternative fuel for ordinary Portland cement production. This can be introduced at existing ordinary Portland cement plants by modification and installation of specific equipment.

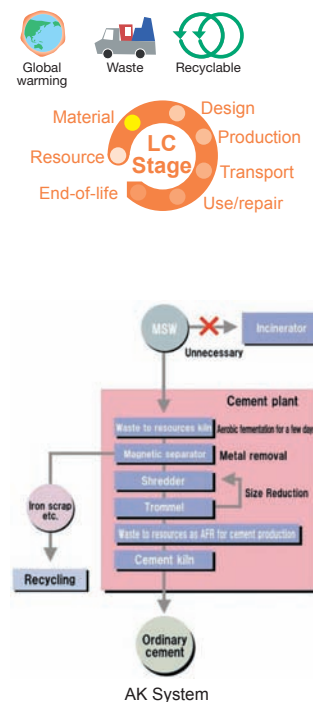
Characteristics of AK System

1. MSW is directly transported to the cement plant equipped with the AK System.
2. MSW is placed into a rotary digester and is aerated and fermented around 3 days. MSW converts into a homogeneous and stable product that can be utilized as fuel and raw material for cement production.
3. The generation of dioxins is suppressed during the high temperature burning process in excess of 1,450°C.

TAIHEIYO CEMENT CORPORATION

Daiba Garden City Building, 2-3-5, Daiba, Minato-ku, Tokyo, 135-8578, Japan
Tel +81-3-5531-7438 Fax +81-3-5531-7620
URL <http://www.taiheiyo-cement.co.jp/>

Available in: Japan



ES-2-007

Reuse and recycling
recycling systems

Tungsten Recycling System for Carbide Cutting Tools

Environmental performance

Tungsten is a refractory metal in its property, and tungsten carbide has high hardness at high temperature and is used for the cemented carbide cutting tools which are indispensable to metalwork a variety of parts and components in automobiles, household electric appliances, and other industries.

Tungsten is also known as one of the rare metals, and its resource in the world is very limited. Tungsten materials processed by the conventional recycling method are used in limited application areas because of its insufficient quality.

MITSUBISHI MATERIALS group has developed a new recycling method to recycle tungsten, while ensuring the high quality of recycled tungsten.

Product performance

At present, we are the only manufacturer that can recycle used cemented carbide by metallurgical refining process. We recycle tungsten from used cemented carbide tools and alloys collected in the manufacturing process.

JAPAN NEW METALS CO.,LTD

1-6-64 Sennari-cho, Toyonaka, Osaka, 561-0829, Japan

Tel +81-6-6333-1171 Fax +816-6331-5358

URL <http://www.jnm.co.jp/eng/index.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Carbide Cutting Tool

ES-2-008

Reuse and recycling
Industrial waste disposal business

Gasification Furnace

Environmental performance

ORIX Environmental Resources Management operates the core zero-emission plant at the Sai-no-kuni Resources Recycling Facility in Yorii-machi, Saitama Prefecture through a PFI partnership. Utilizing the latest thermal decomposition and gasification methods, the plant recycles waste without releasing any incinerator soot or airborne ash whatsoever. In addition to industrial waste from factories and offices, the plant provides waste processing services for many local governments. Waste is processed and converted into recyclable materials such as slag, metal, metallic hydroxides, industrial salt and synthetic gas. The synthetic gas is used as an efficient fuel to generate electricity. The plant processes 450 tons of waste daily, one of the largest processing volumes among private-sector facilities in Japan. The facility's defining feature is that it processes the waste it receives at roughly 2,000 degree C, enabling almost all of the waste to be recycled. In addition, the environment around the facility is protected through implementing self-regulations for controlling dioxin emissions to one-tenth of legal regulations.

ORIX Environmental Resources Management Corporation

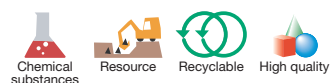
12-15 Nihonbashi-kobunacho, Chuo-ku, Tokyo, 103-0024, Japan

Tel +81-3-6667-2280 Fax +81-3-3249-1975

URL <http://www.orix.co.jp/grp/>

URL <http://www.orix.co.jp/resource/>

URL <http://www.orix.co.jp/grp/co/environment/index.htm>



The zero-emission plant at the Sai-no-kuni Resources Recycling Facility

ES-3-001

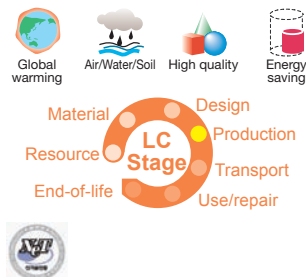
Outsourcing

technology to produce supplementary fuel

Technology for drying sewage sludge

Environmental performance

- 1) Technology for drying sewage sludge to produce supplementary fuel in coal-fired power plant
 - Technology for producing coal fuel pellets with a diameter of between 2 and 8 mm from sewage sludge, by palletizing the sludge and reducing its moisture contents from 80% to 10% using a mixer equipped with double rotation blades
 - Energy-saving technology for producing fuel from sewage sludge; condensed latent heat is recovered from waste heat in the first drying process, and used in the second drying process



POSCO E&C

568-1, Goedong-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-704, Korea
 Tel +82-2-3466-3906 Fax +82-2-3457-2899
 E-mail 141278@poscoenc.com
 URL <http://www.poscoenc.com>



Process diagram of resourcing technology using organic sludge

ES-3-002

Outsourcing

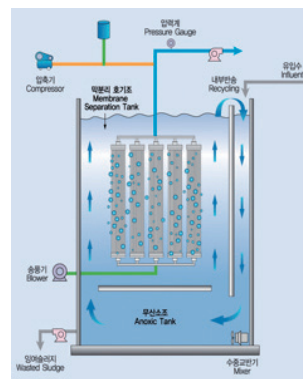
advanced wastewater treatment system

Advanced Wastewater Treatment System using Vertical Single Reactor, Submerged Hollow Fiber Membrane, and FeCl₃ (DMBR Process)

Environmental performance

- 1) Advanced treatment MBR* technology which saves energy and space
 - Saves power costs by employing non-power-driven air supply technology
 - Simplifies processes by integrating four water-treatment processes (biologic reaction tank - secondary sedimentation reservoir - filtration facility - disinfection facility) into a single reaction tank, thereby reducing the site area by 50% or more compared to the previous situation
- 2) Reuse of treated water for various applications
 - Improves quality of water obtained from treated sewage up to ten times compared to the previous technology
 - Contributes to realizing hydrophilic environments in rivers and improves the water quality of water source areas, as well as utilizing the water in a range of applications in the agricultural and industrial sectors

*MBR: Membrane Bioreactor



Daewoo E&C

Pavilion I of Gumho Asiana, 57, Simun-ro 1 (il) -ga, Jongno-gu, Seoul, 110-857, Korea
 Tel +82-31-250-1134 Fax +82-31-250-1133
 E-mail euisin@dwconst.co.kr
 URL <http://www.dwconst.co.kr>

Available in: Republic of Korea

ES-3-003

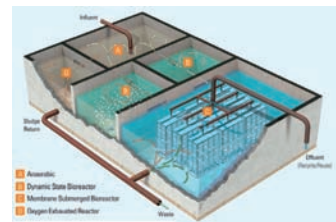
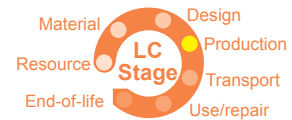
Outsourcing

advanced wastewater treatment system

Advanced Wastewater Treatment System Using Two Reactors Alternately Operated by Nonaeration-Aeration-Nonaeration and Nonaeration in a row and Submerged Polyethylene Hollow Fiber Membranes (KSMBR)

Environmental performance

- 1) Cost-effective technology due to its compact and integrated process
- 2) Technology applied world-class hollow-fiber precision membrane developed solely in Korea
- 3) Securement of stably treated water quality and unmanned operation technology
- 4) Distribute sewage treatment technology appropriate for urban natural ecology restoration and advanced urban system
- 5) Nature-friendly green technology for the preservation of water quality of the four major river water quality in Koreatechnology
- 4) Distribute sewage treatment technology appropriate for urban natural ecology restoration and advanced urban system
- 5) Nature-friendly green technology for the preservation of water quality of the four major river water quality in Korea



Ssangyong Engineering & Construction Co., Ltd.

7-23, Sincheon-dong, Songpa-gu, Seoul, 138-726, Korea
 Tel +82-2-3433-7818 Fax +82-2-3433-7989
 E-mail hyuhur@ssyenc.com
 URL <http://www.ssyenc.com>

Available in: Republic of Korea

ES-3-004

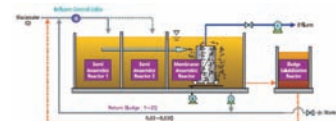
Outsourcing

advanced wastewater treatment system

MBR technology for advanced sewage treatment & sludge reduction which incorporates the inflow control technique and sludge solubilization tank

Environmental performance

- 1) MBR technology which simplifies process configuration using inflow control techniques (semi-anaerobic tanks 1 & 2, Oxidic tank with submerged membrane)
- 2) Biochemical solubilization technique of organic sludge with alkalophiles to convert the sludge into dissolved COD
- 3) Solubilized sludge used as a carbon source in a biological nutrient removal system under low organic loading condition



Hanhwa E&C

Hanhwa Building, 1, Janggyo-dong, Jung-gu, Seoul, 100-797, Korea
 Tel +82-42-865-6497 Fax +82-42-865-6760
 E-mail ksshin74@hanwha.co.kr
 URL <http://www.hwenc.com>

Available in: Republic of Korea

DF-MBR (Dynamic Flow Membrane Bioreactor with Sludge Reduction) Process

ES-3-007

Outsourcing
environmental services

Environmental Due Diligence

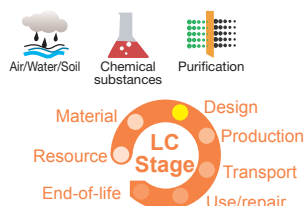
Environmental performance

E&E Solutions has conducted more than 1,000 environmental due-diligence projects worldwide.

We also conduct site assessments to evaluate project-site conditions in accordance with protocols established by the American Society for Testing and Materials (ASTM). Our engagements range from standard methods to custom-designed investigations.

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU
TOKYO, 101-0021, Japan
Tel +81-3-6328-0080 Fax +81-3-5295-2051
URL <http://www.eesol.co.jp/en>



ES-3-008

Outsourcing
environmental services

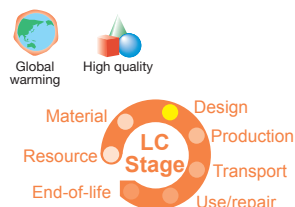
Energy Solutions and GHG Consulting

Environmental performance

We provide various kind of services on Green House Gas (GHG) management and carbon offset, including technical support in development of renewable energy, survey on planning and proposing GHG emission reduction strategies and solutions, support in registration of Clean Development Mechanism and Joint Implementation projects.

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU
TOKYO, 101-0021, Japan
Tel +81-3-6328-0080 Fax +81-3-5295-2051
URL <http://www.eesol.co.jp/en>



ES-3-009

Outsourcing

energy management services

Energy Management Service

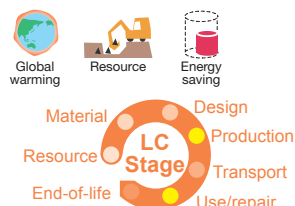
Environmental performance

UGL Premas is a leading total asset management company in Asia. Headquartered in Singapore, with staff strength of 2000, we provide facilities management and engineering services for various types of facilities across Asia and Middle East regions.

Our Energy Centre, the first accredited ESCO, specialises in energy management solutions and procurement services. It has helped building owners identify savings of more than S\$10 million annually in total.

United Premas Limited

Block 750 Oasis, Chai Chee Road Technopark @ Chai Chee #01-01, 469000, Singapore
Tel +65-6876-0088 Fax +65-6538-8146
E-mail info@ugl-premas.com
URL www.ugl-premas.com



ES-3-010

Outsourcing

technical services

Kankichi-kun System

Environmental performance

Various spillages of fat and oil, including a management system for a grease-trap at food shops and food areas, such as in hotels, commercial buildings, shopping centers and food service chain shops, are improved and solved with nonconventional innovative services, realizing a more than 75% reduction of CO₂ emitted from facilities and more than 94% reduction of waste. Collected fat and oil are recycled and reclaimed into biomass fuel, enabling a reduction of fossil fuel use. In addition, inflow controls of highly-concentrated fat and oil into building pits and sewage systems lead to reduced effluent loads for good water regimes and the eradication of bad smells in towns. The developed products are provided as "green servicing," contributing to a reduction in emissions.

Product performance

An innovative and clean eco technology service to improve and resolve various spillages of fat and oil, including a management system for a high-environmental-burden grease-trap, in the food industry. This project is conducted under the Ministry of Economy, Trade and Industry's Development for Different Fields in New Business Policy



TBM, Inc.

2-1247 Ogawachou Kodairashi Tokyo, Japan

Available in: Japan

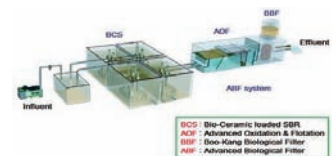
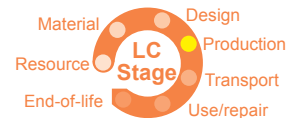
ES-3-011

**Outsourcing
technical services**

Technology for treating livestock waste, consisting of a combination of SBR filled with ceramic carriers, agglutinated floating, ozone oxidation, and bio-film filtration

Environmental performance

- 1) Livestock waste treatment technology tailored to the unique circumstances of each region by applying purification (BSC-basis), resource generation (BCS-Fertilizer) and recycled energy production (BCS-Energy) technologies
- Technology for the full purification (BCS-Basis) of livestock wastewater, the most difficult area of water treatment
- Technology for converting livestock waste-water into fertilizer (BCS-Fertilizer), facilitating environmentally-friendly agriculture
- Technology for producing recycled energy (BCS-Energy) from livestock wastes



Boo-Kang Tech

Pavilion I of Gumho Asiana, 57, Simun-ro 1 (il) -ga, Jongno-gu, Seoul, 135-929, Korea
Tel +82-2-3453-5221 Fax +82-2-556-2025
E-mail bkt21@bkt21.co.kr
URL <http://www.bkt21.co.kr>

Available in: Republic of Korea

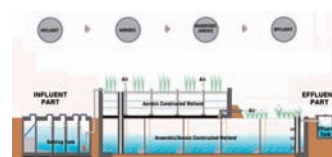
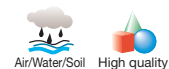
ES-3-012

**Outsourcing
technical services**

Advanced Sewage Treatment Technology using the Aerobic Constructed Wetland with Natural Air Draft System & the Anaerobic/anoxic one (SNR Process)

Environmental performance

- 1) Eco-friendly Advanced Sewage Treatment technology is composed of the Aerobic Constructed Wetland with Natural Air Draft System and the Anaerobic/anoxic (wetland) tank
- This eco-friendly technology is composed of the aerobic constructed wetland (reeds are planted) and the anaerobic/anoxic one (aquatic-plants are planted) connected in series which is packed with sand and gravel. Organic matter, nitrogen and phosphorus are removed passing through the aerobic constructed wetland which keeps aerobic conditions via a natural air draft system using horizontal & vertical pipes and the anaerobic/anoxic constructed wetland without oxygen supply



Sungil En-Tech

1176, Igok-ri, Munsan-eup, Jinju-si, Gyeongsangnam-do, 660-841, Korea
Tel +82-55-760-6200 Fax +82-55-760-6201
E-mail sungilet@chol.com
URL <http://www.sungilet.com>

Available in: Republic of Korea

ES-3-013

Outsourcing

technical services

Advanced sewage treatment & sludge reduction technology featuring a carrier coated with nitrification microbes

Environmental performance

- 1) Advanced sewage treatment & sludge reduction technology with high nitrification rate and superior treatment capabilities, incorporating carriers coated with nitrification microbes
 - Filling with carriers coated with nitrification microbes accelerates the rate of stabilization of the nitrification at the early stage. The nitrification rate is kept high in the winter season, too, and the probability of pore clogging is kept low. The technology is an advanced sewage treatment & sludge reduction system for removing organic substances, nitrogen and phosphor from raw sewage.



Taeyoung E&C

Taeyoung E&C Building, 10-2, Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-777, Korea
 Tel +82-2-2090-2200 Fax +82-2-2090-2241
 E-mail kyh@taeyoung.com
 URL <http://www.taeyoung.com>

TAEYOUNG

Available in: Republic of Korea

ES-3-014

Outsourcing

technical services

Technology for generating resources from living municipal wastes using a stocker-type pyrolysis and a bath-type melting furnace

Environmental performance

- 1) The first technology for Waste treatment using stocker-type pyrolysis and bath-type melting furnace in Korea
 - Technology directly pyrolyzing organic substances (e.g., paper and plastics) in living municipal wastes with high-temperature off-gas in pyrolysis furnace kept at low-oxygen environment to converting the substances into gaseous substances, carbon condensed materials and inorganic substances
 - Unburned carbon substances (char) and inorganic substances after pyrolysis fully burned and converted into slag (vitrification) status with its heat in melting furnace



Halla Energy & Environment

Halla Building, 174-14, Garak-dong, Songpa-gu, Seoul, 138-811, Korea
 Tel +82-2-2047-5164 Fax +82-2-2047-5396
 E-mail syark@hallasanup.com
 URL <http://www.hallasanup.com>



Available in: Republic of Korea

ES-3-015

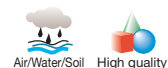
Outsourcing

technical services

Municipal solid waste treatment technology by the pyrolysis-gasification-melting hybrid reactor using Non-transferred hollow type plasma torch

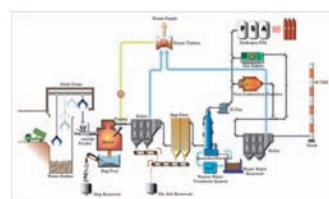
Environmental performance

- 1) Safe treatment of and generation of resources from living wastes
- Technology for the safe treatment of and generation of resources from Municipal Solid Waste in an integrated furnace where the processes of pyrolysis, gasification and melting are simultaneously performed using a high-temperature plasma torch



Adplatech

461-38, Jeonmin-dong, Yuseong-gu, Daejeon, 305-811, Korea
 Tel +82-42-478-9800 Fax +82-42-478-9805
 E-mail jimjung@adplatech.com
 URL <http://www.adplatech.com>



Available in: Republic of Korea

ES-3-016

Outsourcing

pipe flushing services

Water-saving flushing system for newly built hot and cold water pipes

Environmental performance

The amount of wash water used in the flushing for newly made hot and cold water pipes is significantly reduced using a transmission barrier filter. At the same time, the number of working hours involved in filling pipes with water are also reduced by using a vacuum pump. The flushing method for hot and cold water pipes conserves resources by significantly reducing the volume of wash water used as well as the number of working hours involved.

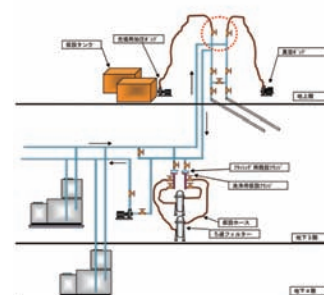
The technique is expected to be used in cogeneration systems for district cooling and heating and for pipes to cool large-sized machinery.

Product performance

Fewer frequencies of water changes needed: conventionally, 50 to 100 t of wash water are required to flush a pipe with a capacity of 10 t, but the new method takes only about 20 t to complete washing.



設備イメージ



NIHON MIZU-SHORI KOUGYOU CO.,LTD.

8-14 Sugahara-chou, Kitaku, Osaka, 530-0046, Japan
 Tel +81-6-6363-6330 Fax +81-6-6363-6372
 E-mail mizushori@nifty.com
 URL <http://www.mizu-shori.com>

Available in: Japan, Asia

ES-3-017

Outsourcing

remediation system of PCB contaminated soil

Remediation system of PCB contaminated soil

Environmental performance

- Remediation plant of PCB contaminated soil operates as it meets the demand of society to contribute its safety.
- The treated soil is recycled as cement materials

Product performance

- GEOSTEAM TM*1 method is received evaluation of Practical level by the public proof examination of the Ministry of the Environment.
- Equipment : 11,000t/year It's the largest system in Japan.*2
- In August,2009 : It acquired recognition of Soil Contamination Countermeasures Law.
- Supports it in total from Investigation and Analysis to Purification.

*1 : GEOSTEAM is a registered trademark of Toshiba.

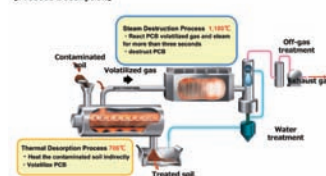
*2 : At the time of the end of December in 2009

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
Tel +81-3-3457-4844



[Process Description]



Remediation system of PCB contaminated soil

ES-4-001

Management-related

building work, except wooden building work

Energy-Saving Diagnosis and Proposal Service E-family

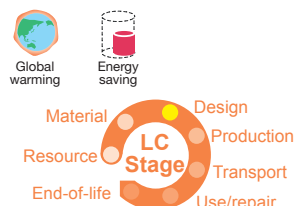
Environmental performance

Maeda Corporation has developed the energy conservation diagnosis and proposal tool, E-family, in order to realize a quantitative evaluation of the amount of energy consumption and the CO₂ emission reductions buildings.

Product performance

E-family consists of E-entry and E-quartet. E-entry is a simplified energy conservation diagnosis tool, which calculates the reduction rate of energy and CO₂ emissions in the blink of an eye. E-quartet is an energy conservation proposal tool, with which technological equipment is comprehensively evaluated with full-fledged simulation to propose adequate equipment.

- * E-entry, a simplified energy conservation diagnosis tool
The amount of energy consumption in a building is estimated based on the conditions of the building after inputting simple conditions of it while talking with customers, and the effects of the proposed energy-saving methods are also forecasted.
- * E-quartet, an energy conservation proposal tool
Environment-friendly and economic building plan is proposed by combining a variety of architectural and equipamental methods. By the highly accurate simulation, LCC (Life Cycle Cost) for the economical judgment of a building and LCCO₂ (Life Cycle CO₂) for the judgment of environmental load are calculated to perform a comprehensive evaluation.



MAEDA CORPORATION

2-10-26 fujimi,chiyodaku,Tokyo, 179-8903, Japan
Tel +81-3-5276-5551

ES-4-002

Management-related

wastewater management

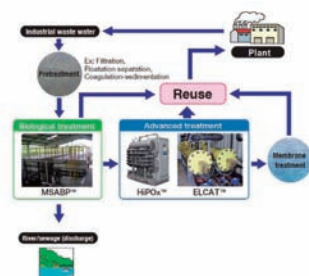
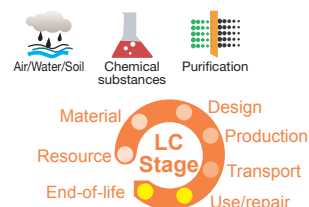
Wastewater Treatment Technology-MSABP™, HiPOx™ and ELCAT™

Environmental performance

Comprehensive Waste Water Treatment Solutions for water recycle/reuse though our environmentally friendly and advanced technologies

Product performance

- 1) MSABP™:Multi-Stage Activated Biological Process with micro-organism food chain
 - * No excess sludge, nor its disposal cost (less energy&CO₂)
 - * Capable for treating highly concentrated effluent without dilution
 - * Decomposes hard to decompose effluents; detergents, antiseptics etc
 - * Applicable to food/petro/chemical/pharma industries
- 2) HiPOx™:Innovative Advanced Oxidation Process (AOP) with hydrogen peroxide & multiple ozone injection
 - * Less ozone injection compared to treatment with ozone alone, reducing running costs
 - * Decomposes 1,4-Dioxane, PPCPs and EDCs, chlorine-based solvents etc
- 3) ELCAT™:Consists of 2stages, Electrolytic and Catalyzed reaction
 - * High treatability for toxic, non-biodegradable materials; dye, detergent, phenols etc



Teijin Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan
Tel +81-3-3506-4593
E-mail wpt@teijin.co.jp
URL <http://www.teijin.co.jp/english/index.html>

ES-4-003

**Management-related
energy services**

ESCO (Energy Service Company)

Environmental performance

We have achieved reduction of approximately 40,000 tons per year of CO₂ emission in 2008.
It contributes to the prevention of global warming.

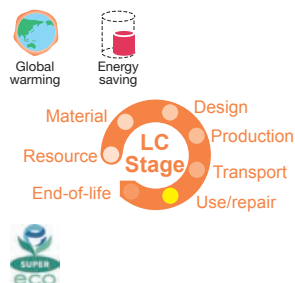
Product performance

The ESCO business offers comprehensive services for energy savings to customers, and covers cost required for repairing relevant equipment with a budget saved by energy saving. The service includes energy saving diagnosis, energy saving proposal, equipment installation, finance, and maintenance. Taking advantage of the Group's collective strength, Hitachi has already achieved remarkable success in a wide variety of sites, including factories, hospitals, office buildings, and research facilities. The project contributes to reduce energy consumption and CO₂ emissions. Award of "Excellent ESCO business" for 4 consecutive years, receiving a high evaluation from outside the company. (sponsored by The Energy Conservation Center, Japan)

Hitachi, Ltd. Urban Planning and Development Systems Company

14-1, Sotokanda 4-chome, Chiyoda-ku, Tokyo, 101-8010, Japan
Tel +81-3-3620-1040 Fax +81-3-5697-2624
E-mail info.toshi.bk@hitachi.com
URL <http://www.hitachi.co.jp/products/urban/energy/index.html>

Available in: Japan, Indonesia, Singapore, Thailand, Philippines, Malaysia



ES-4-004

**Management-related
library systems**

A library system "Livre"

Environmental performance

By using "Livre", paperless of the books card and the management ledger and efficiency improvements of the clerical work are achieved. Compared with the system unavailable (operation with paper), we can reduce CO₂ of 66.6%.

Product performance

"Livre" is library system, which Hitachi Systems & Services, Ltd. offers. The characteristics of "Livre" are as follows.
- Enable easy operation for the loan and the return of the library book.
- Enable quick search for books.
- Provide variety of statistics associated with the library operation.

Hitachi Systems & Services, Ltd.

Nagoya Lucent Tower, 6-1 Ushijima-cho Nishi-ku, Nagoya, 451-6028, Japan
Tel +81-52-569-2128 Fax +81-52-569-2132
E-mail livre-sales@hitachi-system.co.jp
URL <http://www.hitachi-system.co.jp/lvr/>

Available in: Japan



Main Menu of "Livre"

ES-4-005

Management-related
document solutions

Document Solution "LIBINITY"

Environmental performance

"LIBINITY" is a unified brand of the document solution of Hitachi Systems & Services, Ltd.

It reduces the consumption of the paper, which leads to the reduction of the CO₂ emission associated with the transportation of the paper by 42.3%*. This reduction is achieved by replacing distribution of the conventional paper with information sharing on the network.

*It is a value calculated in our model case.

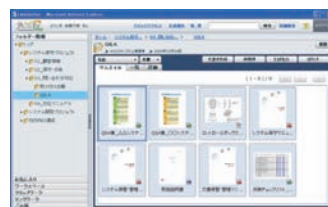
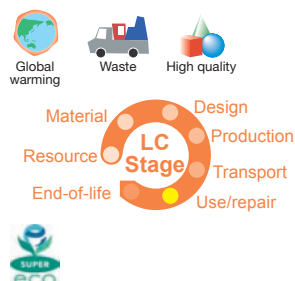
Product performance

"LIBINITY One" is next-generation document management system. It adopted Rich client technology with realizing high user interface, and it greatly improved usability.

"LIBINITY Millemasse" is a high-performance filing system to keep a large quantity of documents and images for unification. It easily realizes high document management at a low cost.

Hitachi Systems & Services, Ltd.

JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo, 108-8250, Japan
Tel +81-3-3763-3264 Fax +81-3-3763-3291
E-mail libinity@hitachi-system.co.jp
URL <http://www.hitachi-system.co.jp/libinity/>



Document Solution "LIBINITY"

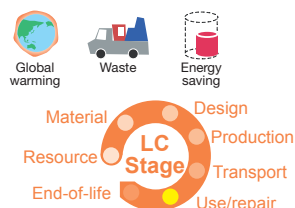
ES-4-006

Management-related
environmental education content

Environment Education Contents Series :Environmental Communication Club

Environmental performance

"Environmental Communications Club" is an environmental educational package for understanding global environmental problems and the negative environmental impact, and for considering the environment. Contents include animation and games. Users can enjoy and learn about environmental issues. These contents are used for study by school children's class trips to the garbage incinerator and the recycling plaza of the municipality.



TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

Muza Kawasaki Central Tower, 1310, Omiya-cho, Saiwai-ku, Kawasaki-Shi, 212-8551, Japan
Tel +81-44-548-7711 Fax +81-44-548-7884
E-mail eco.master@toshiba-tpsc.co.jp
URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Various Contents

ES-4-007

Management-related

environmental management

Information Collecting and Analyzing Tool Supporting Environmental Management

Environmental performance

- In one platform (server), installed are three sub-systems for collecting and analyzing the information, for controlling waste with the administration of agents, and for monitoring chemical substances. "ECO Rates" is a total package in which each sub-system is connected each other.

Product performance

"ECO Rates" supports, as a real managing system, the information management that is the base of the environment management.

- The system is a WEB-base scheme that is yielded from actual business needs and has an enough record about being used.
- We offer "version up" service every year to conform to the latest law and acts.
- "Add on" operation and customization of the function can be arranged so as to meet the customer's business uses. In addition, we support the customers on the whole from the introduction of system to the practical use policy and operative rules.

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

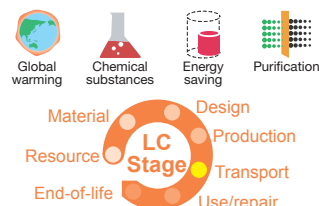
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



ECO Rates Integrated Environmental Information system

ES-4-008

Management-related

LCA software

Life Cycle Assessment Software :Easy-LCA for WEB V5.0

Environmental performance

Easy-LCA is a supporting tool to conduct life cycle assessment (LCA) effectively. It evaluates quantitatively the influence of the product on the environment at the stage of design, and combines scientifically the results with the analysis and improvement of the product.

Main features

- The latest database based on the economical statistics table of fiscal year 2000 (published in 2004) has been included.
- Assessment of the discharge of environmental loading is possible according to the distinction of units and parts.
- Comparison of an old product and the new one is possible
- Impact evaluation
- Inventory evaluation of 30 kinds of products including CO₂ / NO_x / SO_x is possible.

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

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E-mail eco.master@toshiba-tpsc.co.jp

URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Easy-LCA screens

ES-4-009

Management-related

LCA software

LCA software "JEMAI-LCA Pro"

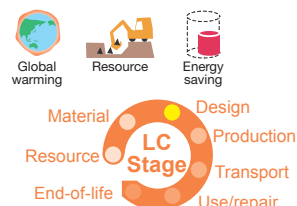
Environmental performance

JEMAI-LCA Pro is LCA software developed by the National Institute of Advanced Industrial Science and Technology (AIST) and Japan Environmental Management Association for Industry (JEMAI). The JEMAI-LCA series has been available since 2000, and over 1000 copies have been sold, occupying the largest share in Japan's LCA software market. The software is equipped with the following functions: -A modifiable inventory database containing a wide range of processes with resource consumption and emissions. -New data adding through a process sheet or visual input output sheet. -Process tree management. -Estimation of environmental impact in overseas countries using electricity data and an import model of 200 countries/regions. -Inventory analysis and impact assessment including Japanese and European methods. -Report writing support based on the format outlined in the ISO 14040s specifications.

Japan Environmental Management Association for Industry (JEMAI)

2-1 Kajicho 2-chome, Chiyoda-ku, Tokyo, 101-0044, Japan
Tel +81-3-5209-7708 Fax +81-3-5209-7716
E-mail jemai-lca@jemai.or.jp
URL <http://www.jemai.or.jp/>
URL http://www.jemai.or.jp/CACHE/lca_details_lcaobj198.cfm

Available in: Worldwide



JEMAI-LCA Pro

ES-4-010

Management-related

LCA software

System Integration Life Cycle Assessment SI-LCA

Environmental performance

Quantitative evaluation technique about the environmental load of a system & service product is becoming more and more important. Hitachi developed SI-LCA (System Integration - Life Cycle Assessment), an environmental-impact-assessment technique and program to evaluate the effects on CO₂ emission reduction of SI product over its entire life cycle.

Product performance

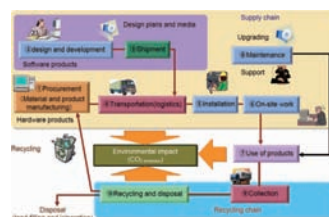
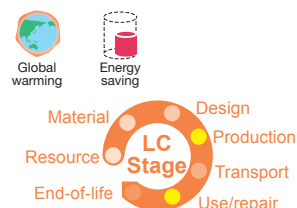
SI-LCA (System Integration - Life Cycle Assessment) evaluates:

- (1) 10 lifecycle stages. Lifecycle stages are composed of procurement, design, shipment, transportation, installation, local calibration, usage, maintenance, collection and recycling.
- (2) the environmental impact of hardware, software and services.
- (3) quantitatively both positive effects such as less movement of people or things and negative effects such as energy consumption during operation.

Hitachi, Ltd.

Hitachi Omori 2nd Bldg., 27-18, Minami Oi 6-chome, Shinagawa-ku, Tokyo, 140-8572, Japan
Tel +81-3-5471-2745 Fax +81-3-5471-2746

Available in: Japan



SI-LCA target stages

ES-4-011

Management-related
software

Storage Management Software ETERNUS SF

Environmental performance

The Eco Mode function of ETERNUS disk storage systems provides power saving facilities for the disk drives. ETERNUS SF AdvancedCopy Manager and Storage Cruiser apply the power saving features to greatly reduce the power consumption of disk storage system for backup drives that are used infrequently.

For example, about 10% of power saving of an ETERNUS DX80 D2D backup environment is possible.

In addition to that, ETERNUS SF Storage Cruiser can visualize power consumption and temperature of disk storage system.

Product performance

ETERNUS SF AdvancedCopy Manager provides fast backup/restore and replication by using Advanced Copy Function of ETERNUS disk storage system.

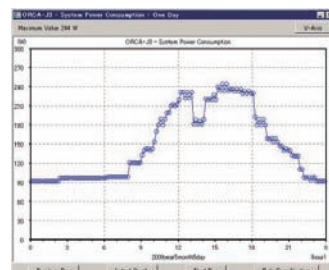
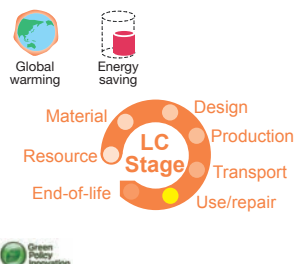
Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan

URL <http://www.fujitsu.com>

URL <http://www.fujitsu.com/global/services/computing/storage/eternus/products/eternus-sf/>

Available in: Worldwide



graphical presentation of power consumption of ETERNUS disk storage system

ES-4-012

Management-related
software

Server Management Software ServerView Resource Coordinator VE

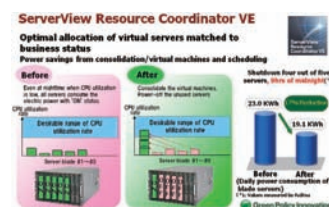
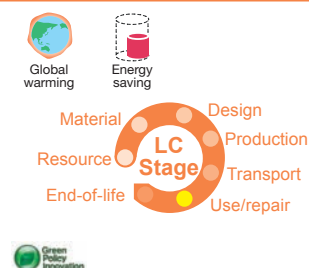
Environmental performance

ServerView Resource Coordinator VE realizes the optimum arrangement of virtual servers tailored to business execution status. Approximately 17% of power consumption is reduced with intensive virtual servers by turning off the free servers at night when CPU utilization rates are low.

Product performance

* Consolidated operation of multiplatform

Standardized operation and observation that differs by virtual environment and platform prevents complications. Daily operation, such as the starting, rest and rebooting of servers, and indication of server information, can be operated on a single display.



Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan

URL <http://www.fujitsu.com>

URL http://ts.fujitsu.com/products/standard_servers/system_management/serverview_rcve.html

Available in: Worldwide

Power savings by ServerView Resource Coordinator VE

ES-4-013

Management-related
software

Data Collection, Operation and Analysis Support Software SLIMOFFICE/SLIMOFFICE EX

Environmental performance

Software to support the collection, operation and analysis of data on the environmental performance (environmental performance results) of organizations.

This product is useful in creating ISO 14001 support, environmental accounting, environmental report and initiative promotion plans to prevent global warming.

Since various ordinances, regulations and controls (revised Law Regarding the Rationalization of Energy Use is covered) are also available, this software has functions to make environmental information visible in order to increase the value of the company by making reduction plans and conducting environmental analysis management.

Product performance

Environmental management information system "SLIMOFFICE EX" is software exclusively for the total management and analysis of companies. The software supports everything from the collection of environmental-performance data to the environmental accounting of organizations.

Environment-related information is collected and analyzed efficiently from various bases to highlight the environmental performance of organizations. Template-ledger sheets for environmental accounting are fitted as standard, enabling users to introduce environmental management easily.

This product can be utilized to create ISO 14001 support, environment accounting, environmental reports and initiative promotion plans to prevent global warming. Various ordinances, regulation and controls (revised Law Regarding the Rationalization of Energy Use supported) are also available.



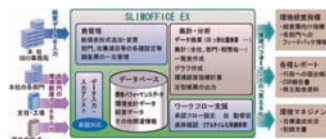
Global warming



Energy saving



Green Policy Innovation



Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan
URL <http://jp.fujitsu.com>

Available in: Japan

ES-4-014

Management-related
software

Systemwalker Desktop Patrol V14g

Environmental performance

Systemwalker Desktop Patrol V14g raises PC user's awareness of environment (reduce power consumption) by displaying the estimated amount of consumed power. It also provides functions to encourage PC power saving settings and force users to do it consistently, and allow administrator (management server) to compel the power saving setting without depending on user's moral.

Moreover, effects and contribution to environmental conservation by power-saving efforts in organization-wide can be confirmed by auto-created reports. This supports to take new measures in response to situation and business of each branch.



Resource



Energy saving



Green Policy Innovation



Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan

Available in: Japan

ES-4-015

Management-related
software**TonerSaver : software solution achieves the cost saving & ecology at once.****Environmental performance**

There is a statistic that a company with 5,000 employees who is printing comparatively large amount, is printing 62 million pages and spending 1.5million US dollars for toner annually.

It is expected that the user can save the cost of 450 thousand USD by saving 30% of toner, and 750 thousand dollars if saving 50% of toner in the example above.

Controlling the amount of toner cartridge can reduces CO₂ emission. Assuming that the weight of a toner cartridge is 3kg, 50,034kg of CO₂ can be reduced.

Product performance

TonerSaver is a software solution utilizing an originally developed algorithm which is developed for reducing the consumption of toner for laser printers by 50% at the maximum.

The user can reduce the printing cost while maintaining its high-quality print by simple operation, and it's also good for ecology.

**Spline Network Inc.**

Kamon Bldg. 2F, 1-6-11 Shibuya, Shibuya-ku, Tokyo, 150-0002, Japan

Tel +81-3-5464-5468

E-mail sales@spline-network.co.jp

URL <http://www.spline-network.co.jp/>

URL <http://tonersaver.jp/>

Available in: Worldwide

Save the toner without losing Speed & Quality

ES-4-016

Management-related
environmental services**CSR Solution****Environmental performance**

Grace considers all information released by companies to be CSR communication, and will support every kind of communication released by companies with Grace's unique environmental know-how and CSR developed through our environmental-related human solution business.

With many companies' flowering environmental CSR activities, effective media strategy and the creation of communication tools are required to conduct effective corporate communication.

Grace will research customers' needs in detail, and offer the most effective communication tools and ways of representation. Grace will respond to customers with "live" and "effective" tools and chances for communication that is excellent in both quality and creativity.

Product performance

Total support for CSR communication, with design and production, advertizing, promotion, IR, human resource development and CSR management consulting through various brochures, web construction, electrical and video contents, etc.

**GRACE CO.,LTD**

Setani Building 5-4 KOUJIMACHI CHIYODA-KU TOKYO, 102-0083, Japan



ES-4-017

Management-related
data processing services

PLEMIA/ECODUCE

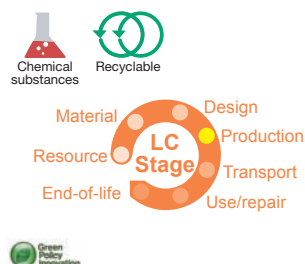
Environmental performance

The product makes it possible to save energy for the enormous works which relate to the business: designing, supplying, information collecting and offering. The main feature is as follows. (1) "Design for Environment (DFE)" is realized. Constituent chemical substances are summarized every product, every unit, on the basis of the parts data table. Compliance with the acts of RoHS, REACH, ELV, etc and with the regulation of company is possible. (2) The efficiency of the inquiry-answer business has been enhanced. The process from the inquiry request to the answer has been unified. It has become possible to carry out the survey business for clients step by step, while confirming the progress. Input-output by JPG, AIS data files and output by IDMS (XMS) data file is possible.

Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan
Tel +81-44-754-3413 Fax +81-44-754-3326
URL <http://www.fujitsu.com/global/about/environment/>
URL <http://jp.fujitsu.com/group/fns/services/plm/ecoduce/>

Available in: Japan



ES-4-018

Management-related
data processing services

Total Building Management System Futuric/SX Series

Environmental performance

The building management system Futuric/SX series is building automation (BA) systems to collectively manage and control information about electricity supply, air-conditioning, lighting, and crime/disaster prevention, while sharing information with users.

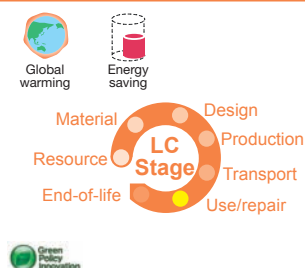
For the protection of the environment and conservation of energy, facility data, such as air-conditioning data, are transmitted to servers and remote PCs in cooperation with BEMS (Building and Energy Management System) to maintain the optimum operating conditions. The system is used to tally up accumulated energy data in order to visualize the amount of CO₂ and environmental load with the aim of supporting efforts to reduce CO₂ emissions.

The revision of the Energy Saving Act in April 2009 obliged building owners to report the amount of energy used in the previous year as well as carbon dioxide emissions and their energy-saving strategies periodically to the government. Fujitsu has developed a solution to protect the environment and conserve energy in order to support energy-saving promotion activities conducted by companies and other bodies.

Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan
URL <http://jp.fujitsu.com>
URL <http://fenics.fujitsu.com/products/futuric/>

Available in: Japan



ES-4-019

Management-related
data processing services

Chemical-material information management system, McConcierge

Environmental performance

McConcierge is a business package produced for companies in the processing industry, which totally manages raw and component materials of chemical goods, physical-chemical data and safety-related information on laws and regulations. Since 2001 it has been compulsory to attach MSDS (Material Safety Data Sheet) to chemical products, and MSDS and labels have been required to correspond to GHS since 2007. In addition, the PRTR Law (Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management), Industrial Safety and Health Act and Poisonous and Deleterious Substances Control Act were strengthened in 2007, forcing companies to follow the laws and acts. This system allows companies to conduct total management of GRC on the safety of chemical products as part of their CSR activities.

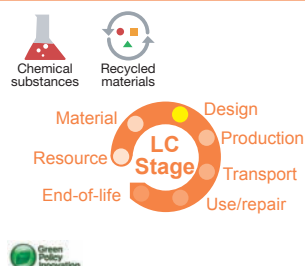
Product performance

- * Information on the dangerousness and harmfulness of chemicals contained in chemical material products to people and the environment are totally managed.
- * Chemical material products are automatically classified according to their dangerousness and harmfulness based on the international rules on classification and indication on chemicals, the Globally Harmonized System of Classification and Labeling of Chemicals.
- * Information required to use products safely is outputted in the form of the Chemical Material Safety Data Sheet, etc.

Fujitsu Limited

1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo Shiodome City Center, 105-7123, Japan
URL <http://jp.fujitsu.com>

Available in: Japan



ES-4-020

Management-related
data processing services

ecoForte -SaaS for complying with Energy Saving Regulation-

Environmental performance

ITOCHU is leveraging know-how and technology it has cultivated through its IT services to offer Energy Conservation & Management Services, including solutions backed by new methodology and integrated energy control systems that benefit from IT devices, to companies with large offices and factories, universities, hospitals, large retail and restaurant franchises, and other clients.

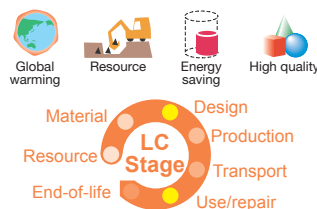
Product performance

Energy Conservation Service "ecoForte" -compliant with the Revised Law Concerning the Rational Use of Energy-
Once the Revised Law Concerning the Rational Use of Energy is enforced in April 2010, each company will be obligated to report the energy used for its entire operation to a Regional Bureau of Economy, Trade and Industry. ecoForte supports series of processes required for the reporting.

ITOCHU Corporation

5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107-8077, Japan
Tel +81-3-3497-2451 Fax +81-3-3497-4181
E-mail support01@ecoforte.co.jp
URL http://www.itochu.co.jp/main/index_e.html
URL <http://www.ecoforte.jp/>
URL <http://www.itochu.co.jp/en/csr/>

Available in: Japan



ecoForte - SaaS for complying with Energy Saving Regulation-

ES-4-021

Management-related

consulting services for geothermal and hydraulic power generation

Consulting service for geothermal and hydraulic power generation

Environmental performance

Mitsubishi Materials has long been actively involved in geothermal and hydraulic energy development and utilization acquired through our own underground resources business.

Geothermal power generation utilizes steam energy extracted from underground by drilling wells as deep as 2,000 m. It requires specialized techniques and technology to utilize effectively high temperature-underground resources in all stages of site survey, drilling, and maintenance of output power.

We developed and now operate two geothermal power plants applied mining technology, and have accumulated the necessary techniques.

With this experience, we are actively participating in geothermal area surveys and technological development projects, and evaluating the potential for further geothermal development.

Product performance

We have six hydroelectric power plants (approx. 17MW total) and two geothermal power plants (59.5MW total) in Japan.

Mitsubishi Materials Corporation (Geothermal & Electric Power Center)

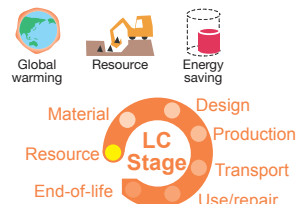
1-297, Kitabukuro-cho, Omiya-ku, Saitama-shi, Saitama, 330-8508, Japan

Tel +81-48-641-5624 Fax +81-48-641-5632

URL <http://www.mmc.co.jp/corporate/en/index.html>

URL <http://www.mmc.co.jp/corporate/en/corporate/business/energy.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



Available in: Worldwide

Ohnuma Geothermal Power Plant (9.5MW)

ES-4-022

Management-related

package software

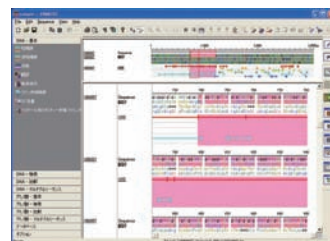
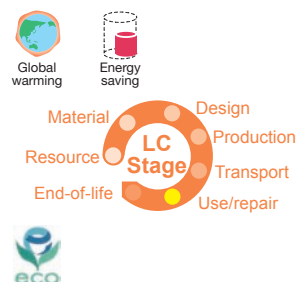
Bioinformatics Software for DNA/RNA/Amino Acid Sequence Analysis

Environmental performance

DNASIS Pro reduces man-hours by 88% by adding the function which coordinates with the reagent order site, and contributes to energy saving.

Product performance

Life science research is making great advances in broad applications such as drug discovery, food safety and environmental conservation. "DNASIS Pro" bioinformatics software contributes to life science research by helping scientists be more productive. "DNASIS Pro" enables researchers edit, annotate and analyze DNA, RNA and amino acid sequences. It includes a comprehensive set of analytical tools such as homology search and multiple alignment. It can be expanded with optional base calling, sequence assembly, and automation modules. Its unique, customizable features are designed to save researchers time and accelerate their life science research.



Hitachi Software Engineering Co., Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

Tel +81-3-5780-2111

URL <http://hitachisoft.jp/products/lifescience/>

URL <http://hitachisoft.jp/products/lifescience/lineup/dnasis/DNASISPro/>

URL <http://hitachisoft.jp/english/csr/index.html>

Available in: Japan

DNASIS Pro

ES-4-023

Management-related
package software

Agricultural Information Management System: GeoMation Farm

Environmental performance

As remote sensing technology can judge the dryness of wheat, it helps farmers to harvest only dry wheat, which saves the energy for drying wheat. According to the evaluation result by SI-LCA(*) index, "GeoMation Farm" can reduce CO₂ emission by 33% for drying wheat. (*:SI-LCA is an evaluation method employed in the Hitachi Group, based on "The eco-efficiency evaluation guideline of ICT" of JFEE. The above evaluation result was applied to a specific business model. Thus, the result will change accordingly in the case of different business models.)

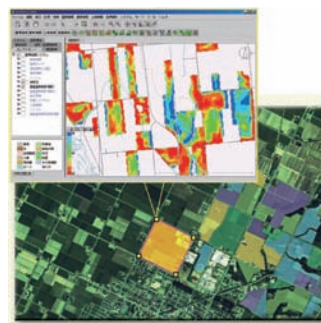
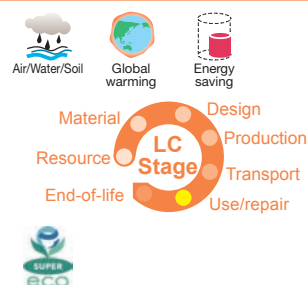
Product performance

- (1) By analyzing the relation between fertilizer and quality/quantity of the crop, farmers can judge the suitable amount of fertilizer. This leads to the low environmental load.
- (2) By plotting scattering of the outbreak of disease or harmful insect on the farmland map, farmers can prevent and exterminate these pest with low agricultural chemicals.

Hitachi Software Engineering Co., Ltd.

4-12-7 Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5780-2111
URL <http://www.hitachi-sk.co.jp/english/index.html>
URL <http://hitachisoft.jp/geomation/farm>
URL <http://hitachisoft.jp/csr/index.html>

Available in: Worldwide



Agricultural Information Mgmt: GeoMation Farm

ES-4-024

Management-related
duplicating services

Human Resources Solution

Environmental performance

Grace will arrange excellent environment-related human resources.

A wide range of knowledge and understanding is required amid growing demands for various types of human resources due to the diversification of environment-related businesses. All the registrants of Grace are talented workers, with experience working at companies and bodies as specialists in environmental problems.

Amid increasing environment consciousness, how companies will cope with environmental problems and how they will turn the problems into business opportunities are important factors at this time. Please let Grace help find environmental solutions for your company. We can deal with any type of human resources, such as workers for laboratories and environmental-related jobs.

Product performance

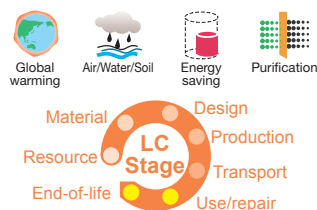
Grace will introduce environment-related human resources.

- * Manpower dispatch
 - * Employment introduction
 - * Other human-resource solutions, research development, laboratory work, environmental consulting, environment and CSR (corporate social responsibility) management, etc.
- Grace also operates the environment-related job site, Environment job.net
URL: <http://www.kankyo-job.net/>

GRACE CO.,LTD

Setani Building 5-4 KOUJIMACHI CHIYODA-KU TOKYO, 102-0083, Japan

Available in: Japan



Environment job.net
URL: <http://www.kankyo-job.net/>

ES-5-001

Others

building work, except wooden building work

Carbon Offset Office Construction Work "Eco-to Office"

Environmental performance

In order to realize a "low-carbon society," Cosmos More has developed a service to offset CO₂ emissions discharged during office construction.

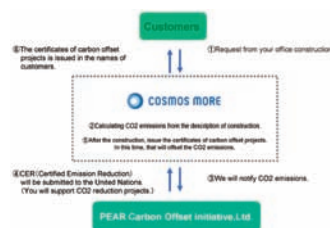
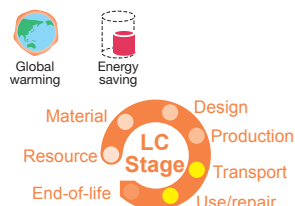
Features of the Service

1. CO₂ calculation simulation software certified by third-party organizations has been developed.
2. CER credits certified by the United Nations are used.
3. The certificates of carbon offset projects and the serial number of customers' credits are issued in the names of customers.

cosmosmore co.,ltd

tokyu building uchisaiwaicho 3-2 uchisaiwaicho1chome chiyodaku tokyo, 100-0011, Japan

Available in: Japan



ES-5-002

Others

new year's cards

Eco Green New Year's Cards (name-printing service available)

Environmental performance

In 2008, we initiated a carbon offset business through afforestation and launched Green Eco New Year's Cards as part of the business. Using part of the proceeds from these sales, we plant trees in Nenga-no Mori (the New Year's Card Forest) in Hokkaido's Bihoro town, thereby offsetting approximately two kilograms of CO₂ for every 10 cards. In 2008, we sold 95,000 cards with a projected offset of about 19,000 kg of CO₂ in 2009.

In 2009, we sold 200,000 cards with a projected offset of about 200 tons of CO₂ in 2010.

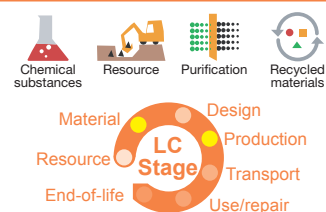
Product performance

We develop environmentally friendly products. In 1988 in Hokkaido, we introduced an on-demand printer that uses only the amount of paper absolutely necessary to print New Year's cards. In 2004, we launched Cardbox - an e-commerce website for greeting cards and New Year's cards. Through these efforts, we have extricated ourselves from the conventional flow of business, which is characterized by significant print loss, and succeeded in labor savings.

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan



Green Eco New Year's Cards

ES-5-003

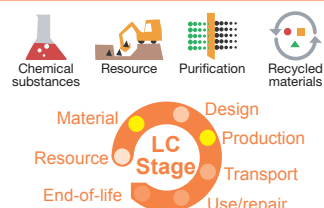
Others

new year's cards

Eco Green New Year's Cards (postcards)

Environmental performance

When we initiated a carbon offset business in 2008, we launched carbon offset-type Green Eco New Year's Cards in bags- a conventional way of selling cards - along with an opportunity for consumers to participate in afforestation initiatives. Specifically, we sold sets of three ecologically designed New Year's cards with lottery numbers and QR codes. The QR codes enable card recipients to see that approximately 400 grams of CO₂ is absorbed per card through afforestation. In 2008, 2,500 sets were sold at supermarkets, bookstores, fancy goods stores, etc. In 2009, 7,500 sets were sold at supermarkets, bookstores, fancy goods stores, etc. nationwide with a projected offset of about 30 tons of CO₂ by the autumn of 2010.



Green Eco New Year's Cards

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

ES-5-004

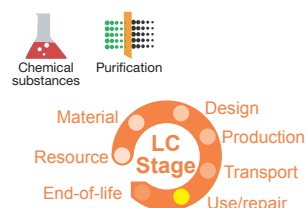
Others

printing services

Waterless printing

Environmental performance

Pripress Center Corporation promotes environmentally friendly eco printing methods, and recommends waterless printing as part of these efforts. Unlike the conventional method of offset printing, no dampening solution is used in this process. This enables printing without waste water and the adverse environmental effects associated with it.



Butterfly mark

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

ES-5-005

Others

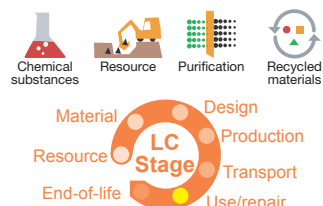
printing services

Soy ink

Environmental performance

Pripress Center Corporation promotes the provision of environmentally friendly products and services, and recommends printing with soy ink as part of these efforts.

Soy ink is produced by replacing some of the petroleum solvents contained in conventional ink with a natural material extracted from soybeans. As it contains very low levels of volatile organic compounds (VOCs), it helps to prevent air pollution and improve work environments.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>



Available in: Japan

Soy sticker

ES-5-006

Others

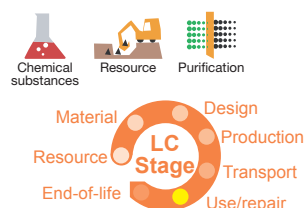
printing services

Non-VOC ink

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and recommends printing with non-VOC ink as part of these efforts.

Non-VOC ink exerts a lower burden on the environment, as all petroleum solvents contained in conventional ink are replaced with vegetable-derived alternatives.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>



Available in: Japan

Publications printed using non-VOC ink

ES-5-007

Others

printing services

Use of environmentally friendly printing paper

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and recommends printing on paper certified by the Forest Stewardship Council (FSC) or paper produced from thinned wood as part of these efforts.

It is also important in terms of effective resource management to use paper containing materials from forests certified by the FSC as being properly managed for environmental conservation and paper produced from thinned wood, which is generated as a result of thinning out stumpage that grows densely in the course of forest development.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

Publications printed using paper produced from thinned wood

ES-5-008

Others

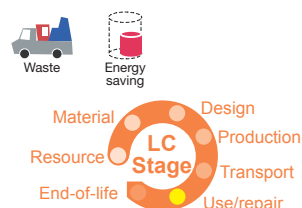
printing services

On-demand printing

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and on-demand printing is one aspect of these efforts.

Unlike conventional offset printing, on-demand printing uses no printing plates, and the process is carried out directly onto the paper. Elimination of the need to make plates means lower energy consumption and higher material conservation. In addition, it is also possible to perform various types of printing in small lots (a process that is inefficient in offset printing), making the technique economically effective too.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

Examples of products printed using on-demand printing

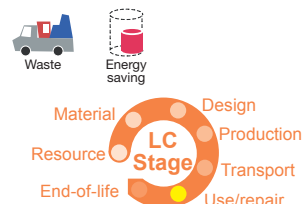
ES-5-009

Others

website constructing services

KANTANET**Environmental performance**

Pripress Center Corporation promotes environmentally friendly products and services, and the KANTANET business blog is part of these efforts. Printed materials are a familiar and easy-to-read medium, and represent an effective and indispensable tool for disseminating information. However, page space is limited, and the resources consumed increase as the amount of information rises. The company recommends that websites also be used in the interests of resource conservation for situations in which printed materials are not absolutely necessary.

**Pripress Center Corporation**

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>



Available in: Japan

KANTANET

ES-5-010

Others

software

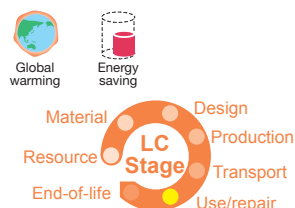
Eco educational website My Bento!**Environmental performance**

My Bento is a free award winning* online serious game, with a purpose to contribute to environmental education. The game raises the player's environmental awareness through creating their own lunchbox (bento) online. The program automatically calculates the amount of CO₂ emission that took place for the lunchbox to be made, and then graphically presents the area of trees necessary to offset the CO₂ emission. Players are often surprised at the enormous amount of CO₂ emission that took place just to make one lunchbox. The game is easy to play and both children and adults benefit by thinking about environmental issues from the perspective of making a lunchbox, a daily activity for many people. (Copyright Notice: Little Studios, Inc./TOKYO GAS co., Ltd.)

#Free online game, My Bento:

http://serious-games.jp/bento_e/ (in English)

* Kids' Design Award (July, 2009)

**Little Studios, Inc.**

C-21, 29-10, Sarugaku-cho, Shibuya-ku, Tokyo, 150-0033, Japan
Tel +81-3-5784-2784 Fax +81-3-5784-2783
E-mail info@happy-news.co.jp
URL <http://www.happy-news.co.jp/>
URL http://serious-games.jp/bento_e/



Available in: Worldwide

Free online game, My Bento!

ES-5-011

Others

software

Eco educational website Enekuitch

Environmental performance

Enekuitch is a free award winning* online serious game. The main character, named Enekuitch (combination of Japanese words that mean energy and consumption), is a somewhat selfish character that loves using energy. Enekuitch will ask the player to buy things for him/her (spend money) or allow him/her to do things (cause CO₂ emission). The player must make decisions on how Enekuitch spends the day. The goal is to spend 100 days with the minimum amount of CO₂ emissions. The game raises the players' awareness on energy conservation by thinking about the amount of CO₂ emission caused by daily activities. (Copyright Notice: Little Studios, Inc./TOKYO GAS co., Ltd.)

#Free online game, Enekuitch:

<http://serious-games.jp/menu/index.html?start=E> (in Japanese)

* Kids' Design Award (July, 2009)

Little Studios, Inc.

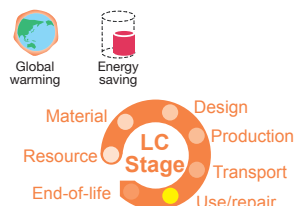
C-21, 29-10, Sarugaku-cho, Shibuya-ku, Tokyo, 150-0033, Japan

Tel +81-3-5784-2784 Fax +81-3-5784-2783

E-mail info@happy-news.co.jp

URL <http://www.happy-news.co.jp/>

URL <http://serious-games.jp/menu/index.html?start=E>



Available in: Worldwide

Free online game, Enekuitch

ES-5-012

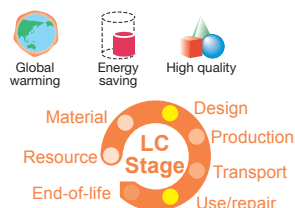
Others

rail transportation services

The series N700 with enhanced energy efficiency

Environmental performance

The Tokaido and Sanyo Shinkansen, playing an important role in the main intercity transportation in Japan, can be regarded as a transportation mode with more energy-efficient performance (e.g. lower CO₂ emissions per unit carriage of passengers) compared with other transportation modes such as airplanes. The Series N700, newly developed and commercially launched in the summer 2007 with the three concepts of "The fastest cutting edge rolling stock", "Superior comfort", and "Superior environmental performance", realized further energy efficiency, for example, by reducing air resistance as a result of the thorough pursuit of smooth body surface by developing a new nose shape and cover-all hood, and by introducing the body inclining system. JR Central and JR West plan to introduce 96 trainsets over the five years ending FY2011.



Central Japan Railway Company / West Japan Railway Company

Central Japan Railway Company

JR Central Towers, 1-1-4, Meieki, Nakamura-ku, Nagoya, Aichi, 450-6101, Japan

URL <http://jr-central.co.jp>

West Japan Railway Company

4-24, Shibata 2-chome, Kita-ku, Osaka, 530-8341, Japan

URL <http://www.westjr.co.jp>

Available in: Japan

Series N700

ES-5-013

Others

rail transportation services

Operation of the world's first diesel hybrid railcar

Environmental performance

In July 2007, the world's first diesel hybrid railcars, the Kiha E200 Type, entered service on the Koumi Line. Diesel hybrid railcars operate efficiently by using electricity generated by a diesel engine to charge a battery which reduces emissions and by regenerative brakes, which charge the battery when braking. Efficiency in tests was approximately 20% better than a standard diesel railcar*. The diesel hybrid railcar is quiet when idling at a station (approx. 30dB). Hazardous substances in the exhaust, such as NOx and graphite, are reduced approximately 60%.

*Results are based on test runs on level ground. On the Koumi Line, which has steep grades, efficiency improved by approximately 10%.

Product performance

*maximum running speed:100km/h

*passenger capacity:117 (seating capacity 46)

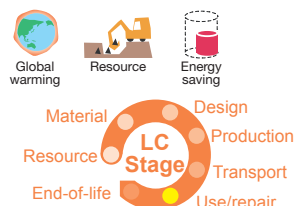
East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

URL <http://www.jreast.co.jp/eco/>

Available in: Japan



The world's first diesel hybrid railcar Kiha E200 Type

ES-5-014

Others

rail transportation services

Environmentally Friendly E231 Series

Environmental performance

The E231 series reduces operational energy consumption by 50% compared to that of the 103 series, measured between Sep. 1985 and Sep. 1986 on Yamanote line, and in terms of weight, 90% of the E231 series railcar can be recycled. Servicing the Yamanote, Takasaki, Utsunomiya, and other metropolitan lines, the E231 series currently realizes the most environmentally friendly design.

Product performance

E231-500 series for Yamanote line

*maximum running speed:120km/h

*passenger capacity in a train set:1752 (seating capacity 502)

East Japan Railway Company

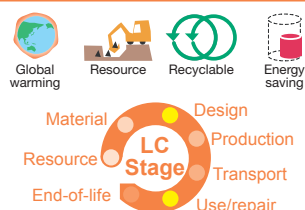
2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

E-mail eco@jreast.co.jp

URL <http://www.jreast.co.jp/eco/>

Available in: Japan



E231 series run on the Utsunomiya Line

ES-5-015

Others

railway cars

E2-Series of Railcars Conserved Energy

Environmental performance

As for energy consumption, by making improvements such as reduction in the weight of railcar bodies, the Shinkansen's energy consumption was reduced by about 30% compared to 20 years ago. Regenerative brakes utilize energy generated during the braking, and return this electricity to the overhead wires.

Product performance

(1) E2-1000 series for Tohoku Shinkansen line (10-car sets)

*maximum running speed:275km/h

*passenger capacity in a train set:814

(2) E2-0 series for Nagano Shinkansen line (8-car sets)

*maximum running speed:260km/h

*passenger capacity in a train set:630

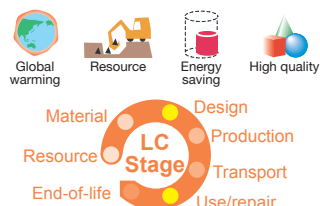
East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

E-mail eco@jreast.co.jp

URL <http://www.jreast.co.jp/eco/>



Available in: Japan

E2-series for Asama and Hayate Shinkansen trains

ES-5-016

Others

ordinary banks

SMBC Environmental Friendliness Assessment Loan

Environmental performance

This Loan provides an environmental-friendliness assessment for customers. Diagnosis sheets will be presented to customers after the financing to help their effort for environment.

This Loan will support customers' environmental management.

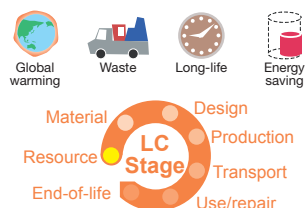
Product performance

The Environmental Friendliness Assessment Loan uses a proprietary standard defined by Japan Research Institute Limited, the think tank of SMFG, and they directly assesses customers based on the standard.

The assessment has seven grading levels, and interest rates for companies that achieve a top-three grading, may be reduced. For more information, please contact the nearest SMBC Corporate Business Office.

*1. Other designated investigations besides the Environmental Friendliness Assessment are required for this financing.

*2. The composition of finances and mortgages as well as the results of the Environmental Friendliness Assessment will be taken into consideration for the decision of interest rates.



Sumitomo Mitsui Banking Corporation

1-2, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-0006, Japan

URL <http://www.smbc.co.jp/global/index.html>

URL <http://www.smbc.co.jp/investment/english/index.html>



Available in: Japan

ES-5-017

Others

forest certification system

Forest Certification System PEFC

Environmental performance

Forest certification is a third party certification system for assuring sustainable management of forests. PEFC is the world largest forest certification system with over 220 million hectares of forests certified to PEFC, covering 27 countries. Sustainably managed forests make much contribution to the environmental problems by absorbing CO₂, protecting bio-diversity, soil and water quality and landscape.

Product performance

PEFC-certified wood and paper products assure that the materials used for the products are from sustainably managed forests, and therefore buying PEFC-certified goods make a large contribution to the promotion of sustainable forest management of the world.

PEFC Asia Promotions

3-11-5 Iidabashi, Chiyoda-ku, Tokyo, 103-0072, Japan
Tel +81-3-3556-5081 Fax +81-3-3556-5082
E-mail info@pefcasia.org
URL www.pefcasia.org

Available in: Worldwide



PEFC-certified products

ES-5-018

Others

rental service

Rentals of Environment-related Analytical Equipment

Environmental performance

As environmental consideration is increasing, ORIX Rentec has enhanced its product lineup and offers rental and used equipment sales of environment-related analytical equipment to be compatible with chemical safety related RoHS and REACH, calls for food safety including pesticide residue, airborne particulates (PM2.5), asbestos, dioxins and PCBs. Rentec is also aiming to expand equipment for the new energy market such as solar power generators and rechargeable batteries for electric automobiles to reduce the burden on the environment.



ORIX Rentec Corporation

5-7-21 Kitashinagawa, Shinagawa-ku, Tokyo, 141-8681, Japan
Tel +81-3-3473-7561 Fax +81-3-3473-7549
URL <http://www.orixrentec.jp/>
URL <http://www.orix.co.jp/grp/co/environment/index.htm>



A gas chromatograph mass spectrometer to be compatible with chemical safety related REACH

ES-5-019

Others

travel industry

ECO TOURS by H.I.S.

Environmental performance

H.I.S. Ecotourism Desk offers eco-tours based on "enjoyment in natural surroundings" through travel and that satisfy at least one of the following five criteria. 1) Learning through travel 2) Positive contribution to environmental conservation 3) Accompanied by professional tour guide 4) Profits put back into local community 5) Reduced waste and minimal impact on the environment by sightseeing.

Global warming

Waste

Purification

Recycled materials

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage

H.I.S. CO., LTD.

5-33-8, SENDAGAYA, SHIBUYA-KU, TOKYO, 151-0051, Japan
Tel +81-3-5360-4810 Fax +81-3-5360-4733
E-mail t-ecotourism@his-world.co.jp
URL <http://www.his-j.com/tyo/eco/top.html>

Available in: Asia, Europe, North America, Southeast Asia, Indonesia, Thailand, Philippines, Malaysia, China

Jungle Cruising



Members list

APO Green Productivity Advisory Committee

(as of February 2010)

■ Chairperson

Mr. Teisuke Kitayama	Chairman of the Board Sumitomo Mitsui Banking Corporation
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■ Vice-Chairpersons

Mr. Yukio Yanase	Director Representative Executive Officer President and Chief Operating Officer ORIX Corporation
Mr. Hajime Bada	President and Chief Executive Officer JFE Steel Corporation
Mr. Takashi Yamagishi	Executive Vice President, Member of the Board Chief Technology Officer Teijin Limited
Prof. Ryoichi Yamamoto	Professor Institute of Industrial Science & International Research Center for Sustainable Materials University of Tokyo
Mr. Tsuneaki Taniguchi	President Japan Productivity Center

■ Advisers

Mr. Yoichi Morishita	Corporate Counsellor Panasonic Corporation
Mr. Masatoshi Yoda	Former President of Ebara Corporation
Mr. Etsuhiko Shoyama	Chairman Emeritus Hitachi, Ltd.
Mr. Kazuyoshi Terashima	Former Vice President of Ebara Corporation

■ Members

Mr. Seiichi Ueyama	Managing Director Aeon Retail Co., Ltd.
Mr. Hidehiro Shinohara	General Manager Environment & Safety Department Ajinomoto Co., Inc.
Mr. Katsuhiko Sugie	General Manager Amita Corporation
Mr. Takeshi Kurashige	Producer Social & Environmental Management Department Asahi Breweries, Ltd.
Mr. Shuji Kato	Director, Member of the Board Chief Social Responsibility Officer Bic Camera, Inc.

Mr. Yoshinobu Shizukuishi	Manager Marketing Department Biznet Corporation
Mr. Kazutoshi Nakamura	Manager Environment Communications Department Canon Inc.
Mr. Satoru Fujimoto	Manager Global Environment Department Daikin Industries, Ltd.
Mr. Yasushi Iwao	General Manager Marketing Department Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.
Mr. Tsutomu Ishibashi	General Manager Corporate Environmental Management Department Ebara Corporation
Mr. Hiroyuki Akiyama	Group Manager Environment Management Group, Corporate Social Responsibility Department Fuji Xerox Co., Ltd.
Mr. Mitsugu Sato	General Manager Advanced Business Group Fujitsu FIP Corporation
Ms. Chie Saito	G-Project Inc.
Mr. Yoichi Takahashi	General Manager Environmental Strategy Office Hitachi, Ltd.
Dr. Megumi Tsukamoto	Governmental Programs Executive Manager of Governmental Programs IBM Japan, Ltd.
Mr. Hitoshi Maekawa	General Manager Administrative Division, Environmental Management Department Itoki Corporation
Mr. Takashi Hongo	Special Advisor Head, Environment Finance Engineering Department Japan Bank for International Cooperation
Mr. Ryuji Takagi	Vice President CSR Division Japan Tobacco Inc.
Mr. Kenji Taniguchi	Staff Deputy Manager Corporate Planning Department JFE Holdings, Inc.
Mr. Kiyoshi Osaki	General Manager Environmental Sustainability Office JVC Kenwood Holdings, Inc.

Mr. Kazuo Ochiai	General Manager Responsible Care Department, Production Technology Division Kaneka Corporation
Mr. Koichi Yanagita	Vice President Environment and Safety Kao Corporation
Dr. Nobutake Nunomura	Corporate Officer General Manager, Environment Department Kikkoman Corporation
Mr. Shinichi Saitou	Group Leader, Environment Group Corporate Social Responsibility Division Kokuyo Co., Ltd.
Mr. Keiji Matsuura	General Manager CSR Promotion Division, Corporate CSR Promotion Division Kyocera Mita Corporation
Mr. Choiku Yoshikawa	Assistant General Manager Mayekawa Research Institute Mayekawa Mfg. Co., Ltd
Mr. Shinji Hirano	General Manager for Special Task Corporate Environmental Policy Planning Office Meidensha Corporation
Mr. Yoshitaka Moriide	Manager Marketing Department Ministop Co., Ltd.
Mr. Michio Hiruta	General Manager Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Yukio Yamamoto	General Manager Environment & Resources Division Mitsubishi Materials Corporation
Mr. Eiichi Hamada	Director Safety, Environmental & Quality Assurance Department Mitsubishi Rayon Co., Ltd.
Mr. Masayuki Saita	General Manager, Environmental Management Division CSR Promotion Unit NEC Corporation
Mr. Hideki Yuzawa	Principal Consultant Nikken Sekkei Research Institute
Mr. Teruo Furuyama	Senior Manager Technical Group, Environmental Affairs Division Nippon Steel Corporation
Mr. Masahiko Iwasaki	Manager Environment Management Group, Global Government Affairs Department- Environmental and Safety Technologies, Technology Development Division Nissan Motor Co., Ltd.

Mr. Yasuhiro Maruyama	General Manager Environment Management Department, Sustainable Management Office Oji Paper Co., Ltd.
Mr. Yuichiro Yamaguchi	Manager Environment Department Osaka Gas Co., Ltd.
Dr. Narito Shibaike	Manager Environmental Planning Group, Corporate Environmental Affairs Division Panasonic Corporation
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Mr. Shingo Sumi	General Manager, Environment Management Department Corporate Environment Center, Environmental Management H.Q., Innovation Group Sanyo Electric Co., Ltd.
Mr. Yusuke Saraya	President Saraya Co., Ltd.
Mr. Teruyuki Hayashi	President Seibu Landscape Co., Ltd.
Mr. Yasuhito Hirashima	Manager Global Environmental Policy Department Seiko Epson Corporation
Mr. Masayasu Taniguchi	General Manager Environmental Management Group, CSR Department Sekisui Chemical Co., Ltd.
Mr. Yuji Kodama	Senior Manager Environment Improving Department Sekisui House Ltd.
Dr. Hiroshi Morimoto	Executive Officer, Group General Manager Environmental Protection Group Sharp Corporation
Dr. Tatsumi Sato	General Manager Global Environmental Management Department Shimadzu Corporation
Mr. Ryo Sasaki	President Shinagawa Chemical Ind. Co., Ltd.
Mr. Seiichi Jimbo	Deputy General Manager Environmental Affairs Department Sony Corporation
Mr. Jo Seiichi	General Manager CSR Department Sumitomo Mitsui Banking Corporation

Dr. Masamitsu Takaya	Executive General Manager Environmental Affairs Department Suntory Holdings Limited
Dr. Rokuro Tomita	Director, Managing Executive Officer Taiheiyo Cement Corporation
Mr. Yoshihisa Kitamichi	General Manager, Corporate Strategic Marketing Office Corporate Strategy Division Teijin Limited
Ms. Mizue Tsukushi	Founder and CEO The Good Bankers Co., Ltd.
Mr. Takeshi Nishibori	CSR Manager General Planning Department The Shiga Bank, Ltd.
Mr. Yoshihiro Kageyama	General Manager Environment Department Tokyo Electric Power Company
Mr. Kyoji Tomita	Manager Environment Department Tokyo Gas Co., Ltd.
Mr. Shinichi Sanbongi	General Manager Corporate Marketing Planning Department Toray Industries, Inc.
Mr. Kiyoshi Sanehira	General Manager Corporate Environment Management Division Toshiba Corporation
Mr. Hiroyuki Kimura	Manager Product Planning Promotion Department, Marketing Planning Division Toto Ltd.
Mr. Tetsuo Miyazawa	General Manager Environment Department Toyo Seikan Kaisha, Ltd.
Mr. Akira Iimi	Group Manager, Environmental External Affairs Group CSR & Environmental Affairs Division Toyota Motor Corporation
Mr. Takashi Masuda	Vice Department Manager, Corporate Social Responsibility Department, Department Manager Environment Promotion Office, CSR Planning Office • Corporate Ethics Office Unicharm Corporation
Mr. Toshiroh Ikegami	Director Urban Gauss Inc.

APO Green Productivity Advisory Committee for the Establishment of the Eco-products Database (as of February 2010)

■ Chairperson

Prof. Ryoichi Yamamoto	Professor Institute of Industrial Science & International Research Center for Sustainable Materials University of Tokyo
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■ Members

Mr. Takeshi Kurashige	Producer Social & Environmental Management Department Asahi Breweries, Ltd.
Mr. Shuji Kato	Director, Member of the Board Chief Social Responsibility Officer Bic Camera, Inc.
Mr. Takashi Tobe	Manager Environment Legislation Department, Environment Planning Center, Environment Headquarters Canon Inc.
Mr. Yasushi Iwao	General Manager Marketing Department Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd
Mr. Koichi Yanagita	Vice President Environment and Safety Kao Corporation
Mr. Shinichi Saitou	Group Leader, Environment Group Corporate Social Responsibility Division Kokuyo Co., Ltd
Mr. Michio Hiruta	General Manager Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Teruo Furuyama	Senior Manager, Technical Group Environmental Affairs Division Nippon Steel Corporation
Mr. Masahiko Iwasaki	Manager Environment Management Group, Global Government Affairs Department- Environmental and Safety Technologies, Technology Development Division Nissan Motor Co., Ltd.

Mr. Yasuhiro Maruyama	General Manager Environment Management Department, Sustainable Management Office Oji Paper Co., Ltd.
Mr. Ryuji Shimono	Councilor Corporate Environmental Affairs Division, Environmental Planning Group Panasonic Corporation
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Dr. Hiroshi Morimoto	Executive Officer, Group General Manager Environmental Protection Group Sharp Corporation
Mr. Jo Seiichi	General Manager CSR Department Sumitomo Mitsui Banking Corporation
Mr. Yoshitane Hirata	Specialist Corporate Environment Management Division Toshiba Corporation

Eco-products Directory 2010 Working Group

(as of February 2010)

■ Chairperson

Dr. Norihiro Itsubo
Associate Professor
Faculty of Environmental and Information Studies,
Tokyo City University

■ Members

Ms. Emiko Aoyanagi
Environment Committee,
Nippon Association of Consumer Specialists (NACS)

Mr. Gakuji Fukatsu
Secretariat
Green Purchasing Network (GPN)

Mr. Masayuki Kanzaki
Ecoleaf Office
Japan Environmental Management Association for Industry (JEMAI)

Mr. Yoshikazu Kihira
Program Officer
Industry Department
Asian Productivity Organization (APO)

Dr. Keijiro Masui
Senior Research Scientist,
Environmentally Conscious Design and Manufacturing Group Advanced
Manufacturing Research Institute
National Institute of Advanced Industrial Science and Technology (AIST)

Dr. Tateki Mizuno
Special Researcher
Society of Non-Traditional Technology (SNTT)

Mr. Katsuyuki Nakano
Project Leader
LCA Development Office
Japan Environmental Management Association for Industry (JEMAI)

Ms. Wakako Suetsugu
Society of Non-Traditional Technology (SNTT)

Ms. Shoko Tsuda
General Manager
Society of Non-Traditional Technology (SNTT)

Ms. Takako Tsuzaki
Eco Mark Office,
Japan Environment Association (JEA)

Related organizations

(as of February 2010)

■ Ecomaterials Forum, The Society of Non-Traditional Technology (SNTT)

Shinbashi-Amano Bldg. 6F, 1-5-10 Nishishinbashi, Minato-ku, Tokyo, 105-0003 JAPAN

Tel: +81-3-3503-4681 Fax: +81-3-3597-0535

E-mail: ecomat@sntt.or.jp

http://www.sntt.or.jp/index_en.html

Environmental label management organization

(as of February 2010)

■ Biomass Mark : Japan Organics Recycling Association (JORA)



Bajichikusan-kaikan, 2-6-16 Shinkawa, Chuo-ku, Tokyo, 104-0033 JAPAN

http://www.jora.jp/jora_news_site/txt/eng/

■ Butterfly Mark : Japan Waterless Printing Association (WPA)



2-31-14 Kohinata, Bunkyo-ku, Tokyo, 112-0006 JAPAN

■ Certificate of Environmental Building Material



University of Seoul Dept. of Mechanical & Information Engineering Jeonnong-dong 90

Dongdaemun-gu Seoul, 130-743 KOREA

<http://www.kaca.or.kr/eng/mission.asp>

■ Eco Leaf(Japan) : Japan Environmental Management Association for Industry (JEMAI)



Mitsui-sumitomo Building 6F/7F, 2-1, Kaji-cho 2 chome, Chiyoda-ku, Tokyo, 101-0044 JAPAN

E-mail: webmaster@jemai.or.jp

<http://www.jemai.or.jp/english/>

■ Eco Mark(Japan) : Eco Mark Office, Japan Environment Association (JEA)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN

Tel: +81-3-5643-6255 Fax: +81-3-5643-6257

E-mail: ecomark@japan.email.ne.jp

<http://www.ecomark.jp/english/>

■ EDP / Korea Ecolabeling : ProgramKorea Eco-Products Institute (KOECO)



613-2, Bulgwang-dong, Eunpyeong-gu, Seoul, 122-706, KOREA

E-mail: jung60@koeco.or.kr / mozzi@koeco.or.kr / sgkang@koeco.or.kr (Eco-Label)

ksg@koeco.or.kr (MRA,Eco-Label) / kohung@koeco.or.kr (EDP,Carbon Footprint)

<http://www.koeco.or.kr/eng/>



■ **Energy star labels / Energy-Saving Label / Uniform Energy-Saving Label :**

The Energy Conservation Center, Japan



GEO Hatchobori Bldg. 5F, 3-19-9, Hatchobori, Chuo-ku, Tokyo, 104-0032 JAPAN

<http://www.asiaeec-col.eccj.or.jp/>



■ **EPD (Sweden) : Environmental Product Declarations**



1-4-10 Akasaka, Minato-ku, Tokyo, 107-0052 JAPAN

■ **Fuel economy sticker / Low emitter vehicle sticker :**

Ministry of Land, Infrastructure, Transport and Tourism (MLIT)



2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8918 JAPAN



■ **Green Energy Mark : The Institute of Energy Economics, Japan (IEE JAPAN)**



Sumitomohudousan Higashiikebukuro Bldg 2F, 3-13-2, Higashiikebukuro, Toshima-ku, Tokyo, 170-0013 JAPAN

■ **Green Label : Singapore Environment Council**



1 Cluny Road, House No 3, Singapore 259569

E-mail: info@sec.org.sg (Mr. Howard Shaw)

<http://www.sec.org.sg/>

■ **Green Mark (Republic of China) : Environment and Development Foundation**



Rm212, Bldg.53, #195 Chung-Hsin Rd. Sec.4, Chutung, Hsinchu, TAIWAN 300

E-mail: ningyu@edf.org.tw (Ning Yu)

<http://greenliving.epa.gov.tw/GreenLife/green-life/english.aspx>

■ **GreenPla : Japan BioPlastics Association (JBPA)**



Universal Bldg.6F, 5-11 Nihonbashi-Hakozakicho, Chuo-ku, Tokyo, 103-0015 JAPAN

<http://www.jpaweb.net/english/>

■ **J-Moss green marks : Japan Electronics and Information Technology Industries Association (JEITA)**



Chiyoda First Bldg.South Wing, 3-2-1, Nishi-Kanda, Chiyoda-ku, Tokyo, 101-0065 JAPAN

<http://www.jeita.or.jp/english/>

■ **NEW EXCELLENT TECHNOLOGY (NET) : Korea Environmental Industry & Technology Institute(KEITI)**



290 Jinheung-no, Bulgwang-dong, Eunpyeong-gu, Seoul, 122-706 KOREA

<http://www.koetv.or.kr/eng/>

■ PEFC Forest Certification : PEFC Asia Promotions



20 Sankyo Bldg 904 3-11-5 Iidabashi, Chiyoda-ku, Tokyo, 102-0072 JAPAN

E-mail: info@pefcasia.org

<http://www.pefcasia.org/>

■ PET bottle reclaimed product : The Council for PET Bottle Recycling



Nikkei bldg. 2F 7-16 Nihonbashi-Kodenmacho Chuo-ku, Tokyo, 103-0001 JAPAN

<http://www.petbottle-rec.gr.jp/english/>

■ TCO Certified : TCO Development



Linnégatan 14 114 94 Stockholm

<http://www.tcodevelopment.com/>

■ Registered in the GPN Database : Green Purchasing Network (GPN)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN

Tel: +81-3-5642-2030 Fax: +81-3-5642-2077

E-mail: gpn@net.email.ne.jp

<http://www.gpn.jp/English/>

■ Thai Green Label : Thailand Environment Institute



16/151-154, Muang Thong Thani, Bond Street, Pakkred District, Nonthaburi 11120

E-mail: pathom@tei.or.th (Mr. Pathom Chaiyapruksaton)

<http://www.tei.or.th/>

■ Thinned Wood Mark : J Forest (JBPA)



Corp Bldg.4F, 1-1-12, Uchikanda, Chiyoda-ku, Tokyo, 101-0047, JAPAN