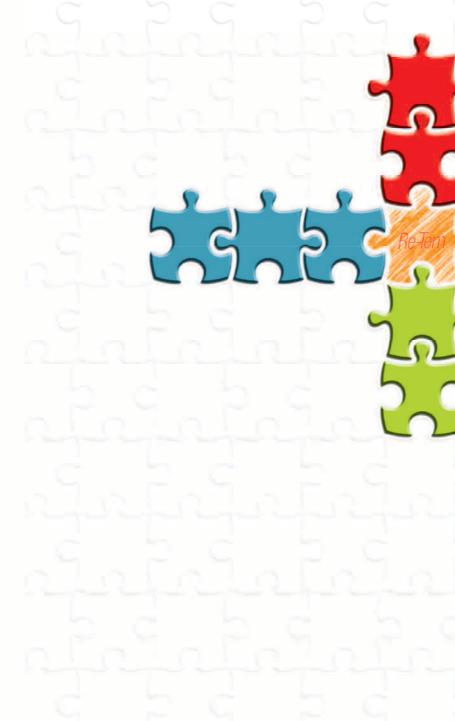


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# For a Sustainable Society

# LINK TOGETHER

# LINK TOGETHER

The world is on the eve of the dawning of sustainable societies.

What sustainable societies require is a network of arterial and venous industries, and horizontal linkage among business, government, and the citizenry as members of a community.

Horizontal linkage by provisions in "soft" aspects frees us from the weight of undue emphasis on "hard" aspects and paves the way for emergence of sustainable societies.

Aware of the changing times that foreshadow sunrise in the twilight before dawn, we at Re-Tem aspire to Japanese-born international contribution reconciling economic and environmental interests.

Giving full play to compassion and thoughtfulness as hallmarks of the Japanese temperament, we are striving to build sustainable societies in Japan and the world as a whole on both the "hard" front of resource recycling and the "soft" one of sophisticated environmental management.

Akira Nakajima President & C.E.O



## Corporate philosophy

and help to build societies brimming with hope and vitality.

### Re-Tem - always evolving with the times

Founded in the city of Mito (Ibaraki Prefecture) in 1909, Re-Tem has continued to evolve with the times. We have achieved a "zero emissions" recycling process for metal composite materials, established a setup for resource recycling on a national scale, constructed a factory in Tokyo, and taken other steps for development of technology for alleviation of environmental burden while expanding our business.

With the start of the 21st century, environmental problems are assuming increasing importance as issues bearing on the very survival of humankind. As a company dedicated to environmental preservation, we at Re-Tem are determined to develop our business on a global scale for realization of sustainable societies by extensive application of our deep store of technical and management capabilities.



1997

1993

Change of name to **Re-Tem Corporation** 

Chiyoda-ku, Tokyo)

(head office in



Construction of the Tokyo Factory

Project consigned by the METI Implementation of a project for survey concerning international resource circulation

1997

Adoption of the

. Kyoto Protocol

1993

Enactment of the

Basic Environment

Act (Japan)

at COP3



Founded in the city of Mito, Ibaraki Prefecture (Our original head-office building still stands. Re-Tem launched resource recycling business in a factory adjacent to it.)

> 1962 Publication of "The Silent Spring" (by Rachel Louise Carson

\_\_\_\_\_



1970 Construction of the Mito Factory

> 1970 Enactment of the Waste Management and Public Cleansing Law (Japan)

> > 1972 Holding of the UN Conference on the Human Environment and adoption of the Declaration on the Human Environment

1985 Adoption of the Vienna Convention for the Protection of the Ozone Laver

> 1979 Enactment of the Act on the Rational Use of Energy (Japan)

> > 1980

specialty crushing machine Process I into the Mito Factory Successful achievement of a "zero emissions" recycling process for metal-plastic composite materials from OA devices etc.

Input of a high-performance

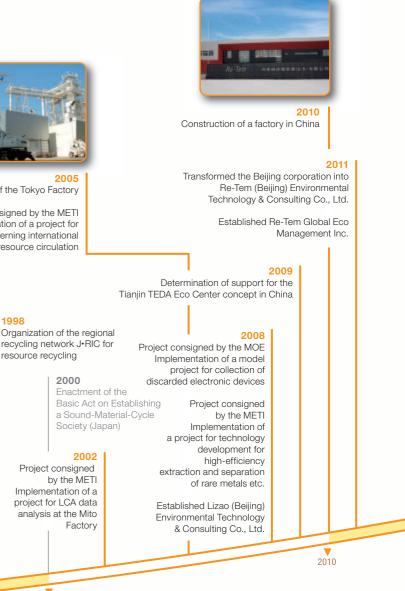
1992 Holding of the UN Conference on Environment and Development (Earth Summit) in Brazil

1990

1991 Enactment of the Act on the Promotion of Effective Utilization of Resources (Japar



1970



2000

Activities of Re-Tem Developments on the world scene

## ECO MANAGEMENT

Re-Tem's business has two major components: the "hard" one of resource recycling and the "soft" one of consulting services. The two are closely coordinated with each other. For example, we are commissioned for individual cases of consultation through receipt of consignments for recycling of industrial waste, and for provision of waste treatment management services through programs of environmental education.

### **Resource recycling business**

- **Recycling of industrial waste** Tokyo Factory, Mito Factory
- **Collection and transportation of** industrial waste
- Management services Recycling management services / resource recycling chain management services, etc.

### Studies and research

Studies and research related to resource circulation / research on technology for collection of rare metals, etc.

#### J.RIC

Regional recycling management services

Reuse services Reuse of products, parts, etc.

### One-stop services

One-stop services in store dismantling and removal, etc.

### **Consulting business**

#### Environmental consulting

Waste management / support for acquisition of wide-area certification / recycling cost optimization / LCA analysis / support for introduction of carbon footprint / consultation related to environmental laws and regulations, etc.

#### Seminars and training

Seminars on waste management risks / seminars on Waste Management and Public Cleansing Law, etc.

### Environmental education

Lectures at companies, schools, public agencies, etc. / programs of hands-on environmental education, etc.

### Eco management services

Support for construction of eco management centers / in-house resource circulation centers, etc.

## Attainment of zero emissions at the Tokyo and Mito Factories

Re-Tem has established two factories for recycling of resources from industrial waste in Tokyo and Mito. It is working for the resource recycling from the large quantities of industrial waste derived in not only the Greater Tokyo Metropolitan Area but also the whole of the Kanto region, with zero emissions of waste in the process.

### TOKYO FACTORY



This state-of-the-art factory was constructed in the Tokyo Super Eco Town zone in 2005. It recycles metal and various other types of industrial waste generated in the Greater Tokyo Metropolitan Area.

Location: 3-2-9, Jonanjima, Ota-ku, Tokyo Site area: 5.293 m<sup>2</sup> Capacity: Crushing machine 864 t/day

### Features of the Tokyo Factory

truckloads of waste per day

#### Reduction of distribution costs and environmental burden

Located close to the heart of Tokyo, which is the source of vast quantities of waste, the factory reduces distribution costs and CO<sub>2</sub> emissions entailed by transportation

Maximum treatment capacity of 864 tons/day The factory can treat up to about 100 10-ton

### Re-Tem's policy on the resource recycling business

- Setup for man-machine collaboration to heighten efficiency of resource recycling Manual dismantling and separation of waste before treatment are followed in turn by an automated treatment process and visual checking
- High reliability corroborated by designation under the system for wide-area certification of waste recycling agents

Re-Tem factories have been certified and designated as wide-area recycling factories of manufacturers of personal computers and other OA equipments

#### Full setup for security

All possible steps have been taken to prevent information leakage and thefts, including locked storage, surveillance cameras, 24-hour monitoring, and access control

HARDOSOFT



## Delivery of high-grade treatment through high-precision recycling by the two factories working together

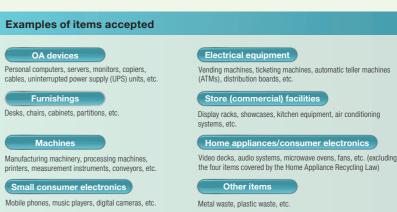
Re-Tem retransforms industrial waste into resources through coordination between its two factories, each with its own distinctive features. For this reason, it delivers benefits not available from other firms.

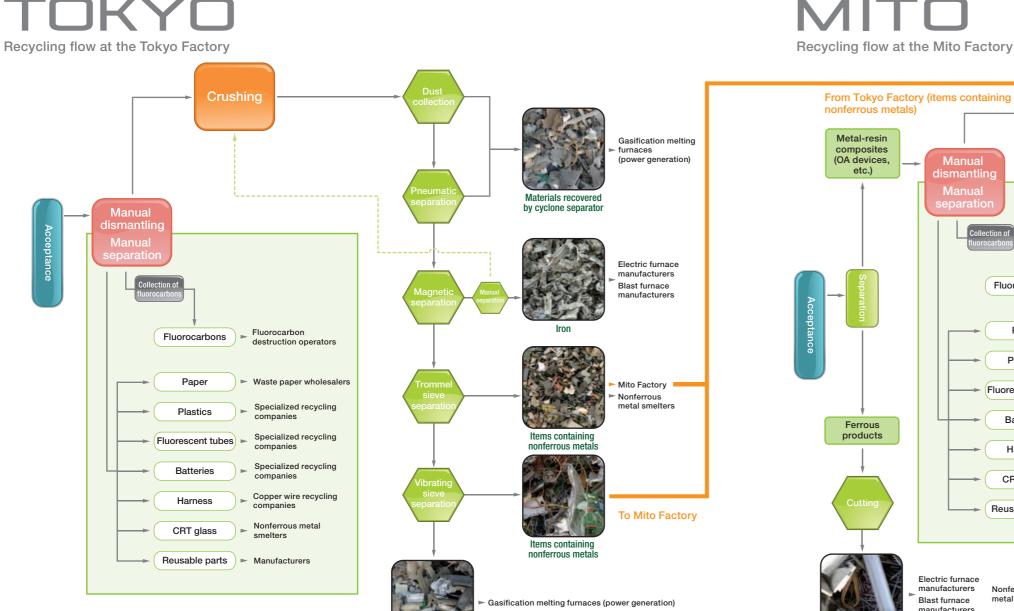
### Advantages of coordination between the two factories

High-grade treatment

Mixtures of nonferrous metals from crushing at the Tokyo Factory undergo high-grade treatment at the Mito Factory for careful separation of gold, silver, and copper sediments, stainless steel, aluminum, and other metals.

**Acceptance of diverse waste** Re-Tem can accept all sorts of waste in all sizes, from mobile phones and computers to ATMs and large machine tools, thanks to the setup of two factories with mutually different features.





Items containing

nonmetals

Electric furnace Nonferrous manufacturers Blast furnace metal smelter manufacturers



Crushing

Fluorocarbon

Waste paper

wholesalers

companies

companies

companies

companies

smelters

Reusable parts 
Manufacturers

Fluorocarbons

Paper

Plastics

Batteries

Harness

CRT glass

Fluorescent tubes

sedin ient with plastic (low grade)



### **ATTENTION**

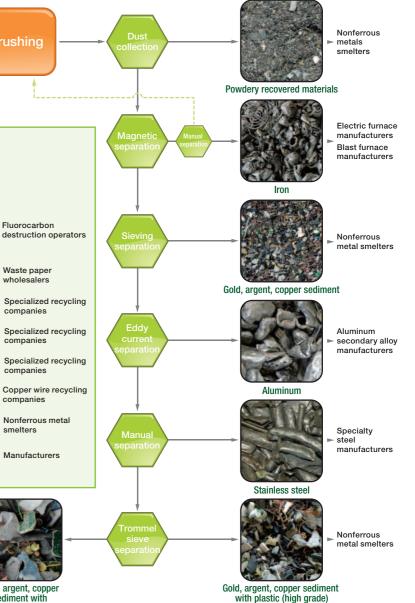
SAMPLE.

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#### Service for issuance of reports on completion of recycling treatment

Re-Tem issues reports on the completion of recycling treatment in response to customer wishes. Prepared with photos and text, these reports clearly set forth the entire sequence of processes, including loading at the transport yard,

unloading at the factory, crushing, analysis of the material balance, and output shipment destinations. The reports assure a transparency and safety that cannot be confirmed merely with a manifest.



## Development of various derivative services based on achievements in resource recycling

Building on the foundation of achievement in the business of resource recycling at our Tokyo and Mito Factories, Re-Tem is developing a variety of derivative services by drawing on its business network, treatment technology, and operating know-how.

### Services in management of waste treatment backed by expertise in technology and resources

#### **Recycling management service**

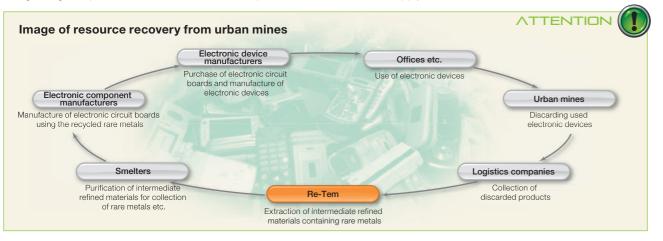
For customers wishing to collect their own products from the market and recycle them, Re-Tem provides advice in all areas including recycling system design and collection logistics, and undertakes the very work of recycling. We also have a record of achievement with recycling factories for home appliances, mobile phones, and copiers.



#### Resource recycling chain management service

By building relationships of cooperation with logistics and smelting companies, Re-Tem has constructed networks integrating the processes of collection, transportation,

disassembly, separation, and smelting. It utilizes these networks for provision of recycling chain management service for stable supply of rare metals and other resources.



### Studies and research -

Studies and research for promotion of resource circulation and collection

Re-Tem accepts commissions for all sorts of study and research from national and local authorities and private enterprises. In this connection, it is taking various approaches to development of forerunning recycling technology and schemes, and improvement of product amenability to recycling.

#### <Maior services>

Studies and research related to resource circulation

Analysis concerning product recycling (calculation of recycling rate, CO<sub>2</sub> emissions, cost, etc.) Research on technology for collection of rare metals

### Management services for promotion of wide-area resource circulation

Regional recycling management service (J·RIC)

This is a resource recycling service for waste-generating enterprises that operate nationwide or in units of areas. In its capacity as the lead manager, Re-Tem has organized waste treatment companies across the country into a network to furnish services up to a uniform standard nationwide. \* J•RIC = Japan Recycle Improvement Committee

#### Features of the J·RIC

- More than 50 bases of 32 companies in eight blocks nationwide
- Centered around members of the Japan Iron And Steel Recycling Institute
- Certification of many of the members under ISO 14001
- Designation of many of the members as wide-area recycling certified and designated firms (factories) for major manufacturers
- Comprehensive coverage extending from Hokkaido to Okinawa

tightening of compliance with laws and regulations.

#### ATTENTION Advantages of J-RIC use



### Alleviation of environmental burden by reuse of waste products

**Reuse services** 

#### Reuse of products

This service assists the reuse of discarded computers and other such products in the same product form. Our expert staff make sure to delete all data input by the previous owners.

### One-stop services to meet customer needs

Package services	<major services=""></major>	
Re-Tem bundles several services into a package tailored to customers with diverse needs.	Vending machine recycling service	One-stop services for used personal computers
	Industrial machinery recycling service	One-stop services for store dismantling and removal
	Banking equipment recycling service	Services in collection and treatment of packaging materials

#### Example: one-stop service for store dismantling and removal

This service is designed for the retail premises such as convenience stores. Through it, we undertake work in all stages including transportation and placement of fixtures and fittings at the time of and after opening, waste transportation and disposal, and dismantling at the time of store closure. Besides centralizing work management, the service is linked to reduction of transportation costs, energy consumption, and CO<sub>2</sub> emissions. In addition, customers can rest assured about compliance with laws and regulations, because the job is being done by professionals in waste handling.



#### Reuse of parts

When the discarded products are not amenable to reuse, we examine prospects for reuse of the parts composing them. We manually dismantle products to support the reuse of liquid crystal display panels, for example.



## "Environmental diagnosis" of customers with a professional's eyes

With its long history of handling the job of resource recycling, Re-Tem has made arrangements for "environmental diagnosis" of a sort unavailable from the ordinary consultant firm, with the eyes of a professional who knows the work sites.

<Major services>

certification)

regulations

<Major services>

**Cleansing Law** 

regulations

stage

Construction of methodology for waste management

Construction of nationwide systems for collection and

recycling of waste products (acquisition of wide-area

LCA evaluation and analysis of the waste recycling

Diagnosis of waste management risk

Optimization of waste recycling costs

Seminars on waste management risks

Seminars on the Waste Management and Public

Seminars on various environmental laws and

Support for introduction of carbon footprint Consultation regarding all environmental laws and

#### **Environmental consulting & solutions**

Drawing on the deep store of know-how and experience accumulated over its long years of work in waste treatment and resource recycling, Re-Tem provides consulting services in all sorts of environmental fields, mainly related to waste. We also supply solutions through activities that are not confined to the proposal of plans but also cover all phases from the actual launch of projects to the stage of operation.

#### Seminars and training

Besides being familiar with many types of cases as a waste treatment business. Re-Tem has an in-house legal affairs department that is engaged in timely collection of an abundance of information on pertinent laws and regulations for input on its own data base. We also hold various kinds of seminars and individual training programs regarding environmental legislation, which is being amended in the direction of tighter control.

#### **Capabilities of Re-Tem's Legal Affairs Department**

Unusually for a company handling waste, Re-Tem has a legal affairs department whose activities cover sales, factories, and even contractors. The department serves as the key unit for sure compliance based on both Re-Tem's own voluntary rules of control and supervision, as well as applicable laws and ordinances.

> Scene at a seminar held by Re-Tem's Legal Affairs Dept. at Kirin Holdings Company, Limited

#### **Environmental education**

Re-Tem actively supports environmental education in diverse fields for companies, public agencies, and educational institutions. The students themselves take an active part in classes held on key words such as "look", "listen", "feel", and "experience", and learn about the importance of the environment, resources, and recycling



Look and get a firsthand look at how waste is turned back into usable resources



Listen

The students see the recycling process The teachers provide easy-to-understand The students actually handle the contents. The students deepen their knowledge of

#### <Major services>

Lectures at companies, schools, and public agencies

Support for corporate environmental education and community business

Programs of hands-on environmental education for elementary and junior high school students and local residents



Feel

descriptions, using slides and other visual of waste products and recycled materials, recycling by disassembling waste products and get a feel for the importance of and sorting their parts themselves



**ATTENTION** 

Experience

## Graduation from elemental improvement to systemic improvement

The solution of environmental problems requires change in socioeconomic systems. Re-Tem advocates such systemic change to lower environmental burden in cities and entire areas.

#### Eco management services

No matter how hard individuals, companies, or governments may strive to resolve environmental problems separately, not much progress can be made in overall improvement without coordination among them. Greater effects can be induced if, for example, Company A in one area reuses the resources discarded as waste by Company B in the same area, and the whole area shares the same environmental infrastructural

#### Eco centers - hubs of eco management <Major ser

Eco centers play the role of hubs of environmental management and information collection within the scope of cities, industrial estates, corporate groups, etc. They gather and analyze information on the needs and issues among companies, citizens, and organizations in the area as well as on the external environment, and implement corresponding initiatives. Their mission is to optimize overall management. Re-Tem supports the construction and operation of eco centers.

Education

Support fo

manageme

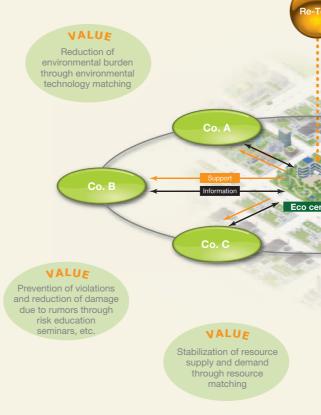
Support for

environme

Informatio

Corporate

#### Conceptual drawing of eco centers (in the case of industrial estates)



facilities. Re-Tem proposes eco management that emphasizes such horizontal linkage. We support the construction of systems oriented toward horizontally linking local governments with companies and companies with each other, to reduce not only environmental burden but also costs on an area-wide basis.

vices>	ATTENTION
vices>	
r target-based ent	Proposal of setups for target management adapted to agenda such as resource conservation and resource recycling
r introduction of ntal technology	Achievement of supply-demand "best matches" for excellent environmental technology
n service	Offering of the latest environment- and law-related information to residents and companies with an emphasis on understandability
and training	Planning and organizing of training and educational events on the theme of resource circulation etc. for companies and residents
consultation	Planning and proposals for companies related to the community business
-	and forecast costs by obtaining the information on the latest legislation and trends
A A A	Co. F
Suppo	
Information	
X	Co. D
A Com	VALUE
	Simultaneous reduction o management costs and risks through waste management risk
VAL	JE analysis
Reduction transportation through re- matchi	on costs source

### Bringing eco management to the world

Re-Tem is consulted about resources and waste by organizations in countries around the world. It is also receiving increasing requests for assistance from Japanese firms building up their presence in other countries. At present, it is avidly promoting the development of global business, at four locations in the United States and China.

#### Establishment of an environmental management firm in Beijing

- Name: Re-Tem (Beijing) Environmental Technology & Consulting Co., Ltd.
- Incorporation: November 2008
- Place: Beijing, China
- Description: consultation about resource circulation and energy conservation, surveys of the Chinese market, and other services for Chinese administrative entities, local firms, and Japanese firms

### Support for an eco center in Tianjin



#### Name: Tianjin TEDA Eco Center

- Period: since 2008
- Place: Tianiin, China.
- Description: support for an eco center to serve as a hub of environment-related information sharing, technology exhibits, and R&D in the Tianjin economic development area (TEDA)

Conceptual drawing of the completed eco center

**Mito Factory Head Office Tokyo Factory** 

#### Establishment of an environmental management firm in Seattle

- Name: Re-Tem Global Eco Management Inc.
- Incorporation: February 2011
- Place: Seattle, Washington, U.S.A.
- Description: consultation about resource circulation and energy conservation, surveys of the U.S. market, and other services for U.S. administrative entities, local firms, and Japanese firms

#### **Operation of a factory in China**



Appearance of Re-Tem's factory in China

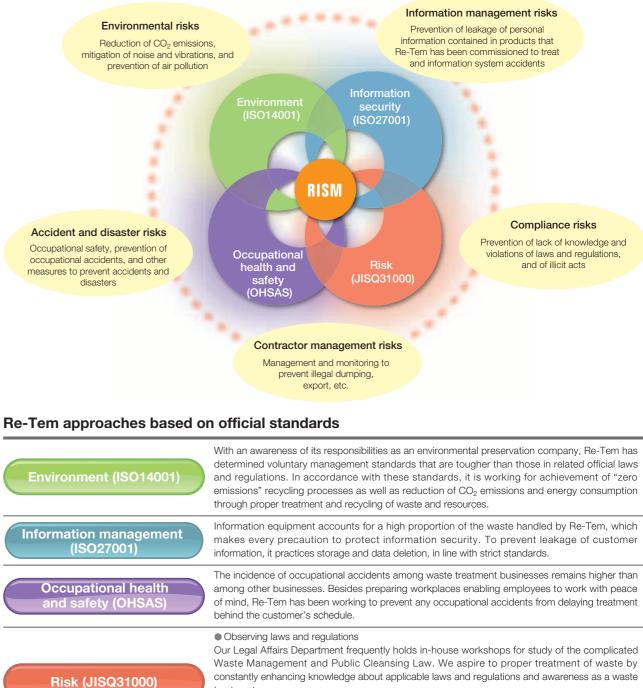
- Name: Re-Tem (China) Corporation
- Incorporation: September 2004
- Startup: November 2010
- Place: Taicang, Jiangsu Province, China
- Description: recycling of industrial waste from Chinese and Japanese firms with high-grade technology of recycling including manual dismantling and separation

Toward optimization of customer risks

customers place their trust.

#### Integration of four official standards under RISM\* \* Re-Tem Integrated System of Management

RISM is a management system integrating four sets of official standards in the areas of the environment, information. occupational safety, and risk in a single platform to enable their efficient operation. Under it, employees erect a scheme



(guidelines based on the Japan Standards Association)

treatment company.

#### With efficacy of RISM, the integrated management system, Re-Tem offers responsible recycling service where

for ongoing performance of the PDCA cycle. It is at the core of Re-Tem's activities not only for meeting customer needs but also for discharging its social responsibilities as a company dedicated to environmental preservation.

- Audit of contractors, buyers, and collection/transportation partners Misconduct by secondary contractors is considered the responsibility of waste generators. For this reason, we audit our contractors and buyers, in addition to collection/transportation partners

## Diverse activities in the environmental and social aspects

To discharge its corporate social responsibilities (CSR), Re-Tem continues to engage in diverse activities in the environmental and social aspects.



## **Environmental aspects**

At its factories and head office, Re-Tem is tightening its activities of environmental preservation based on ISO14001. We have instated LCA analysis in order to calculate and reduce CO<sub>2</sub> emissions, with a view to preventing global warming. Besides participating in patrols for prevention of illegal dumping led by the Ibaraki Industrial Wastes Association, Re-Tem takes part in the Beach Cleanup in Jonanjima event held in Tokyo, every vear.



Employees on patrol to prevent illegal dumping



Employees taking part in Beach Cleanup in Jonanjima



Besides holding tours of its factories for elementary and junior high school students, administrative authorities, and various other organizations and groups, Re-Tem actively accepts invitations for lectures at all sorts of research meetings and events. Our Mito Factory is also engaged in programs of collaborative work with welfare facilities and employs students of schools for the challenged. To create employee-friendly workplaces, we have also made provisions for childcare leave and shorter hours.



Mr. Akira Nakajima, Re-Tem President and C.E.O., speaking at Shinshu University



Students of a school for the challenged in Ibaraki Prefecture visiting Mito Factory

Recent topics

### Tour of the Tokyo Factory by Emperor Akihito

In July 2008, His Majesty Emperor Akihito, who is deeply concerned about environmental issues, toured our Tokyo Factory in Tokyo Super Eco Town.



H.M. Emperor Akihito at our Tokyo Factory (July 2008)

### Publication of our CSR Report

We began publishing the "Environmental Report" on an annual basis in 2001, and changed the name to "CSR Report" in 2006.



#### COMPANY OUTLINE

Company name:	Re-Tem Corporation	
Representative:	President & C.E.O. Akira Nakajima	
Location:	<ul> <li>Head Office</li> <li>3-6-10, Soto Kanda, Chiyoda-ku, Tokyo, 101-0</li> <li>TEL: +81-3-3258-8586</li> <li>FAX: +81-3-3251-580</li> <li>Mito Factory</li> <li>3520, Nagaoka, Ibaraki-machi, Higashi Ibaraki</li> <li>TEL: +81-29-292-1220</li> <li>FAX: +81-29-292-122</li> </ul>	
	<ul> <li>Tokyo Factory</li> <li>3-2-9, Jonanjima, Ota-ku, Tokyo, 143-0002</li> <li>TEL: +81-3-3790-2100</li> <li>FAX: +81-3-3799-850</li> </ul>	
Foundation:	1909	
Incorporation:	1951	
Sales:	2,800 million yen (fiscal year ended July 31, 20	
Number of employees:	123 (as of March 31, 2011)	
Content of business:	Recycling and reuse of resources / sale and pu precious metal materials / dismantling, moving consulting regarding resource circulation and u in eco-industrial parks, etc.	
Authorized for:	Industrial waste management business, indust management business, Class-1 Specified Fluc warehousing business, used product dealer, n	
HISTORY		

1909	Foundation
1951	Incorporation
1952	Advance into Tokyo
1970	Mito Factory
1993	Unique technology
1997	Company name change
	Head office relocation
	Unique technology
1998	J•RIC
2001	Environmental ISO
	CSR
2005	Tokyo Factory
	Information ISO
2007	RISM
2008	<b>Beijing Corporation</b>
	Imperial visit
2010	Prime Minister visit
	Advance into China
2011	Beijing Corporation
	OHSAS
	U.S. Corporation

Incorporated as Nakajima Shoten K.K. Set up Tokyo Branch in Soto Kanda, Chiyoda City Moved the factory to Higashi Ibaraki-gun, Ibaraki Prefecture (current Mito Factory) e Changed the company name to Re-Tem Corporation Transferred the head office function to the Tokyo Branch Organized the regional recycling network (J•RIC) Obtained ISO14001 certification

Started publishing the Environmental Report Completed the Tokyo Factory at Jonanjima, Ota City (Tokyo Super Eco Town) Started operation of RISM (Re-Tem Integrated System of Management) His Majesty Emperor Akihito toured the Tokyo Factory Prime Minister Yukio Hatoyama toured the Tokyo Factory Completed the Re-Tem China Factory in Taicang City, Jiangsu Province Obtained OHSAS18001 (Occupational Health and Safety Management System) Established Re-Tem Global Eco Management Inc. in Seattle

### AWARDS

1996 Won the Chairman's Prize in the Clean Japan Center-sponsored FY1995 Award for Recycling Development Project et al 2000 Mito Factory was certified as Ibaraki Prefecture Excellent Recycling Business Firm

- 2004 Won the Award for Environmental Management Excellence in the 2nd Japan Environmental Business Awards
- 2007 Tokyo Factory won the Chicago Athenaeum's 2007 International Architecture Award Won the Award of the Director-General of the Industrial Science and Technology Policy and Environment Bureau, Ministry of Economy, Trade and Industry (METI) in the 4th LCA Society of Japan (JLCA) Awards Tokyo Factory was certified as Ota City Excellent Factory and won the Town-Friendly Award
- 2008 Won the Excellence Award for the Courageous Management Grand Prix, sponsored by the Tokyo Chamber of Commerce and Industry Won the Award for Promoting the Creation of Recycling-Based Society in the Minister of the Environment Award, promoted by the **3R Promotion Forum**
- 2009 Won the Excellence Award for Environmental Contribution in the 1st Chiyoda City Business Grand Prix
- 2010 Re-Tem's factory in China won the Chicago Athenaeum's 2010 International Architecture Award
- Re-Tem offsets 148 kg of CO<sub>2</sub> for the volume of CO<sub>2</sub> emitted accompanying the use of electricity in the process of printing this report.

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ki-gun, Ibaraki, 311-3116

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010)

ourchase of materials for steel production and nonferrous g, and collecting construction materials and work materials / recycling / resource management and eco-center management

strial waste collection and transport business, domestic waste orocarbons recovery business, general construction business, metal waste dealer

Established by the founder Shinjiro Nakajima in Mito to start resource recycling business

- Installed the high-performance specialty crushing machine Process I in the Mito Factory
- Installed the high-performance fine grinding machine Process II in the Mito Factory

- Obtained ISMS (Information Security Management System) certification, which was converted into ISO27001 in 2006
- Established Lizao (Beijing) Environmental Technology & Consulting Co., Ltd. in Beijing with Waseda Environmental Institute
- Transformed the Beijing corporation into Re-Tem (Beijing) Environmental Technology & Consulting Co., Ltd.