

**REMATEC**  
Innovation for the Earth



# REMATEC 2012 CSR Report

**REMATEC corporation**  
<http://www.rematec.co.jp>



**Innovation for the Earth**

It has been explained that they try contributing build  
 not only recycling-based society  
 but also sustainable social system  
 challenging to develop new technologies and business model  
 to push paradigm-shift

## Editorial Policy

REMATEC 2012 CSR report was edited mainly by the sales and marketing division. For the contents, we referred to opinions and feedbacks from stakeholders and also focused on the followings;

-It contains bigger letters to be readability for all age.

-Reduction of pages to concise.

This report shows concretely how our CSR policy "To create the innovation corresponds to the social issues for the Earth" influences to our operations.

We composed this report the same way we always have. Please feel free to contact us if you have any questions or requests. We hope this would be a great opportunity to recognize our operations.

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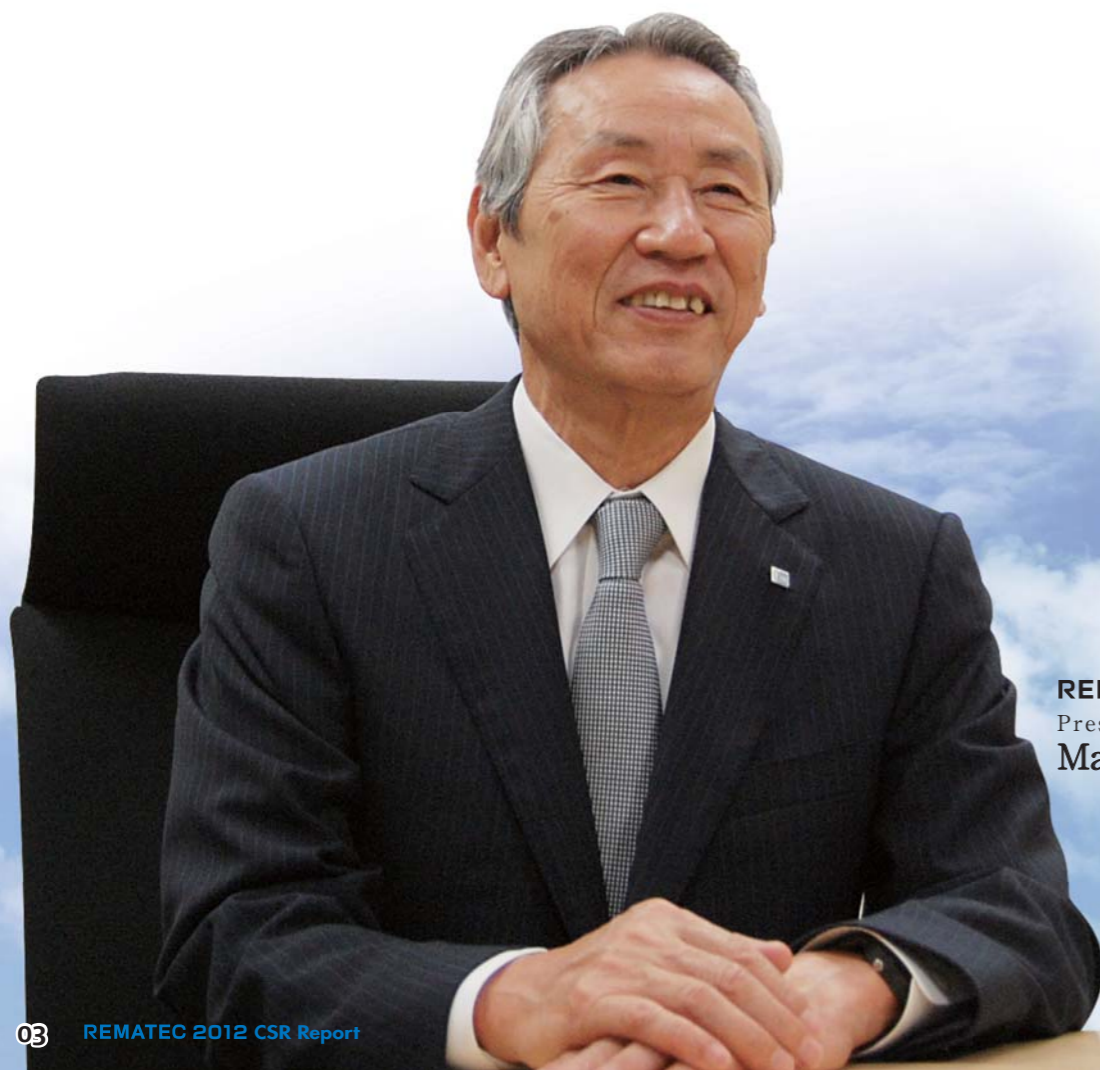
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# Message from the President

## Mission of REMATEC

To create the innovation  
corresponds to  
the social issues for the Earth



REMATEC corporation  
President  
Masatoshi Tanaka

## Innovation for the Earth

Recently, social conditions surrounding companies have been changed rapidly. When the economy is getting recovered from economic downturn caused by the Lehman Brothers bankruptcy in 2008, the world economy has been hit hard by a record level of appreciation of the yen, changing the presidents of Russia and China and reelection of the president of the United States. We have been surrounding by a harsh economic climate in recent year and it will be assumed continuance to change unsteadily.

For Japan, The Great East Japan Earthquake hit on March 11<sup>th</sup>, 2011.

First of all, I would like to express my sympathy to all the victims of the earthquake and also hope to revive their lives and develop their cities and towns as soon as possible.

REMATEC Co., went to the disaster areas right after the earthquake to help and recover. We established Tohoku branch in Morioka city, Iwate in April last year to commit our waste treatment technologies and experiences, expertise and abilities to respond promptly at the work place based on our recovery operation involved in illegal dumping. REMATEC and local companies in the disaster areas started to work together as a Joint Venture (JV) to build a full-scale screening plant on July 2011.

A desalination plant built in November the year and was remodeled this July to expand its capacity of 1,000 ton per day. Ofunato plant of TAIHEIYO CEMENT CORPORATION which works for converting disaster wastes into cement resources is working well and is also

called "A model case of disaster waste treatment operation". Approximately 1,700 people have already visited to observe the plant.

REMATEC is hoping to recover the disaster areas as quick as possible. "Rebuilding the local areas with the local companies" is always in mind and we are promoting the disaster waste treatment with the local companies. Tokyo branch was established last March to develop a promotion of recycling business in the overseas and creating better innovation. We have recruited many outstanding people specialized technology, finance, organization, information and sales planning etc. We are trying to develop more effective technology and strengthen our organization.

REMATEC sets a mission "To create the innovation corresponds to the social issues for the Earth". We are developing 4 operations which are "Resource circulation", "Production of resource", "Recyclable energy" and "Restoration of environment" to promote the innovation. We promise as a leading company of "Sustainable Innovation" to push on toward.

Globalization has presented new environmental and social challenges not only domestically but internationally as well, REMATEC has been meeting these challenges by creating and sharing new values with our stakeholders.

We have issued the annual CSR report and this is our 13<sup>th</sup> edition by our staff as usual. Any and all suggestions and requests would be highly appreciated.

## Our concept: Innovation for the Earth

### Mission of REMATEC

To create the innovation corresponds to the social issues for the Earth

Social image as it should be  
Our concept  
Our roles and social responsibilities

Business plan

Management System

BMS / EMS / OSHMS

Communication with stakeholder

### Principle

Based on our **technology**, we try to be a company which contributes to establishment of a recycling-based society by renewing **natural resources** effectively.

### Social image as it should be

- A society that people can live safely and be secured.
- A sustainable society that both "environment" and "economy" exist.
- A recycling society that based on natural principles.

### Our roles and social responsibilities

- Creating values
- Being responsible for social influences by our organization activity.
- Contributing to solve social issues

## CSR Concept

REMATEC Co., sets business guidelines which are based on 5 keywords "Reliability", "Information disclosure", "Problem solving", "Risk management" and "Integration". We have been trying to be a company that participates in establishment of a recycling-based society and also correspond to our customers. We have issued our annual CSR report since 2000 as a communication tool to stakeholders and this is our 13<sup>th</sup> publication.

Based on the principle, REMATEC's primary operation is environmental business including recycling resources and also solution for the social issues in environmental field like recycling and global warming countermeasures.

On April 1<sup>st</sup> 2010, "Kinki Kankyou Kosan" changed the name to "REMATEC" and set "To create the innovation corresponds to the social issues of environment" as a new REMATEC's mission and "Innovation for the Earth" as the company slogan.

Since CSR activities should be sustainable through our operation, we are responsible as a member of the society for achieving the largest mission to create the innovation. We set "Innovation for the Earth" not only our slogan but also CSR concept and promote both CSR activities and our operations.

## Management System

REMATEC Co., promotes CSR activities and own operations at the same time, also involves in integration of three management systems which are "Business management", "Environmental management" and "Occupational safety and health management" with "Solution of social issues in environmental field". By our usual operations and solving the issues, we believe that we can create the innovation corresponds to the social issues for the Earth.



## The Ministry of Industry of Thailand and the media visited our plant

This May 24<sup>th</sup> and 25<sup>th</sup>, a head and staffs of manufacturing division of The Ministry of Industry of Thailand and also reporters and media, approximately 30 total visited and reported our Osaka plant and Sakai SC plant as representatives of Osaka Eco Town and advanced recycling company.



## Usuki city and REMATEC signed disaster agreement

Usuki city in Oita and REMATEC signed "the agreement of general management for disaster wastes" at Usuki city general office in October 2<sup>nd</sup> 2012.

REMATEC was highly evaluated with developed experiences, expertise, the ability to respond promptly through working with local in Kyushu plant, control the Nakhodka oil spill, the Great Hanshin Earthquake and the general management for waste treatment operations in Ofunato city and Rikuzentakata city where were hit by The Great East Japan Earthquake.

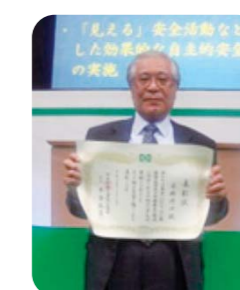


## REMATEC's operations in Tohoku was introduced at the reception related to the annual meetings of the IMF and World Bank

On October 11<sup>th</sup> 2012, the reception related to the annual meetings of the IMF and World Bank was held at Nezu Museum in Tokyo. Our desalination project at Ofunato plant was introduced with a panel.

## Green Cross Award

Mr. Takahashi, CSR promotion manager from REMATEC Kyushu plant won the Green

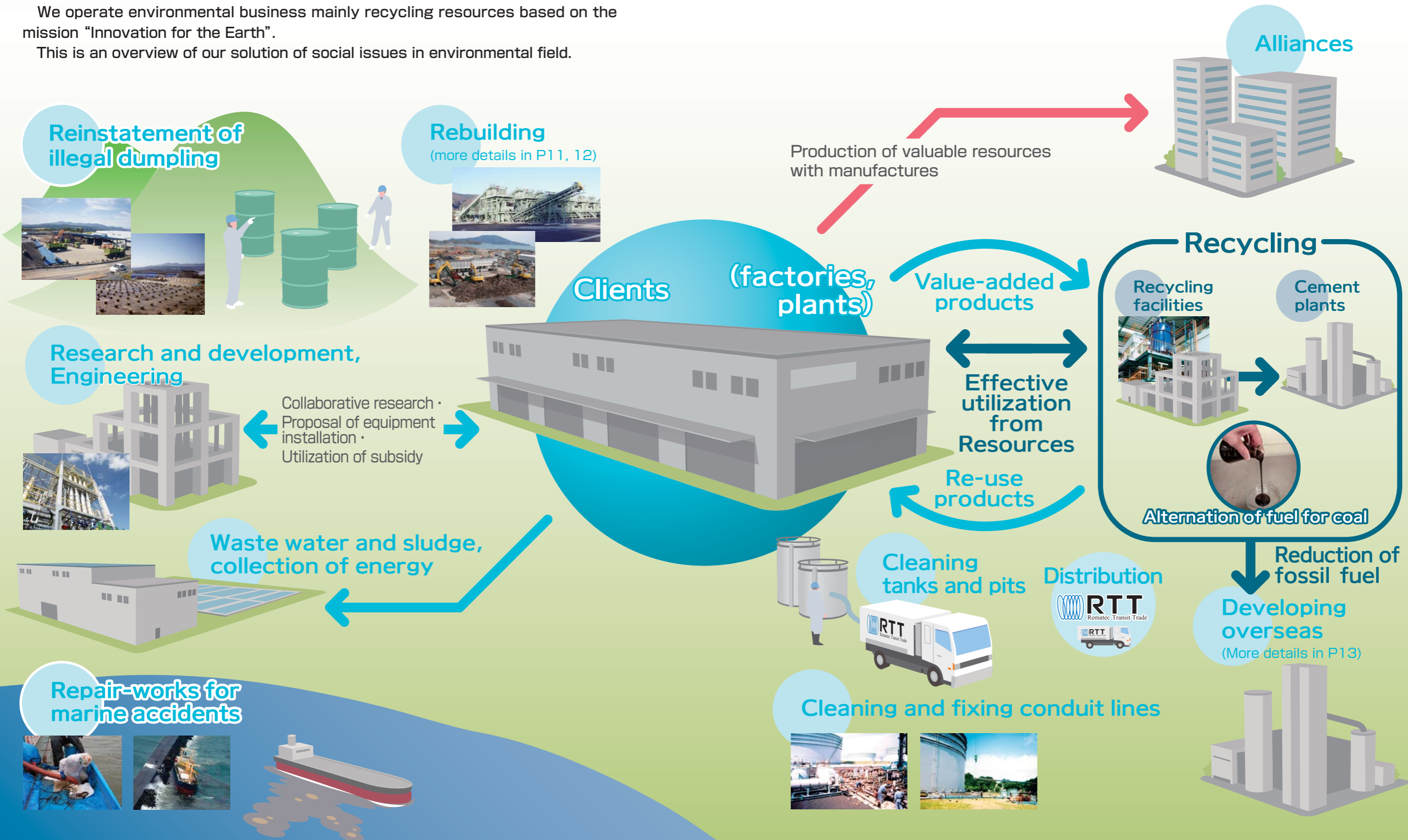


Cross Award at the 71<sup>st</sup> Japan Industrial Safety and Health meeting in Toyama city on October 24<sup>th</sup> 2012. He is the second winner among our company.



# REMATEC Operations

We operate environmental business mainly recycling resources based on the mission "Innovation for the Earth".  
This is an overview of our solution of social issues in environmental field.



# Business Overview

## RF Operation

RF (Reclaiming Fuel): Reclaimed supplemental fuel for burning cement with reversible thixotropic

**97%** High recycling ratio

- Wastes we collected are converted into alternate fuel of coal and being used at cement manufacturing plants

**100,000 tons per year**

**High technology and reliable results**

- We produce and ship RF for 100,000 tons per year
  - Comprehensive waste can be recycled
  - Developing our original mixing technology
- Ex: oil + water + sludge → emulsion



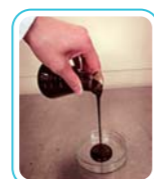
Oil manufacturing company

Semiconductor industry

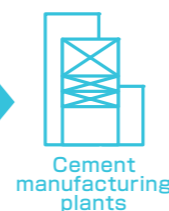
Iron and steel machine industry

Automotive industry

Mixing wastes  
(Waste oil, liquid, sludge etc.)



RF



### Examples of our services

#### Customer's request

We would like to reconsider the ways to dispose wastes due to its constant increase.

#### Our solution

We succeeded to reduce the total costs by evaluating each waste and converting some of the waste into material for RF.

#### Customer's request

We are looking for a safety treatment method since the dust explosion or some kinds of dangers are concerned during the treatment of powdery waste with lower moisture content.

#### Our solution



We prevented scattering of dust by heating it and advised that make a dense of dust lower to reduce the possibility of ignite. This solution was evaluated and brought us a new operation at their plant.

#### Customer's request

We own storage tanks for various waste liquid. We would like to clean up inside of the tanks and dispose all residual liquid.

#### Our solution



By researching storage amount and characteristics of every residual liquid in the tanks, we completed cleaning and disposal in short term. We can provide cleaning heavy oil, chemical, underground tanks in shortly.

## Bio Energy Operation

The operation of methane fermentation system with Sub-Critical water reagency was named as "SILES" (Sakai Illuvies Lutum Energy System) chosen by us

Since 2011, REMATEC has focused on developing a pre-treatment of sub critical water which collaborate with physical-chemical and bio-chemical reactions and practical application of methane fermentation process.

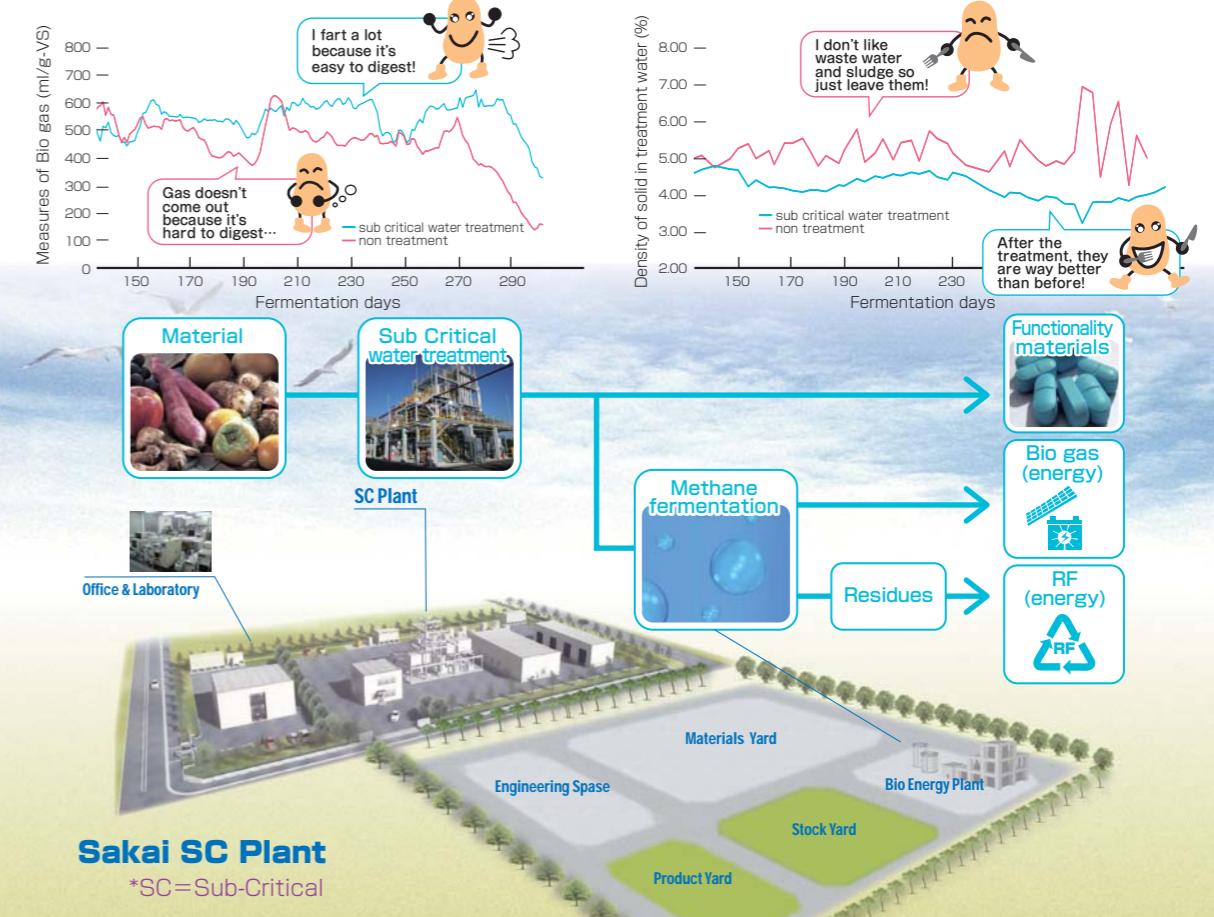
The sub critical water treatment is a technology of decomposition and solubilization material by high temperature and pressure water. That would be like "Boiling things in the huge pressure cooker". The sub critical water treatment for waste water and sludge that not easy to decompose by microbes can decrease residues and increase gas which is like "Once you boil some fish in the pressure cooker, you will be able to eat it even its bones."

At the results of experiments of the sub critical water treatment for waste water and sludge, we found that the gas was increased and the residues were decreased. We are

going to experiment with bigger device and approach to practical application.

This technology is also able to be used for other organism wastes so that we can use it to renew energy from processed residues produced at food processing companies.

Moreover, the treatment technology corresponds to extract functionality materials. REMATEC has established the world's first sub critical water plant for businesses and has implemented reclaiming solvents and acid as our operation. We have been trying to build a system that extracts functionality materials from organism wastes by the sub critical water treatment and methane fermentation of its residue would be the factor for the collection of sustainable energy. REMATEC believes to make it happen near future.



# Business Overview

## Rebuilding Operation

The Great East Japan Earthquake produced approximately 4,350,000 tons of waste in Iwate prefecture. The waste was produced mainly by Tsunami and contained a lot of sea salt. Desalination was assumed as the key of rapid waste treatment so we started a basic study in a table test and afterword, examined in a pilot plant.

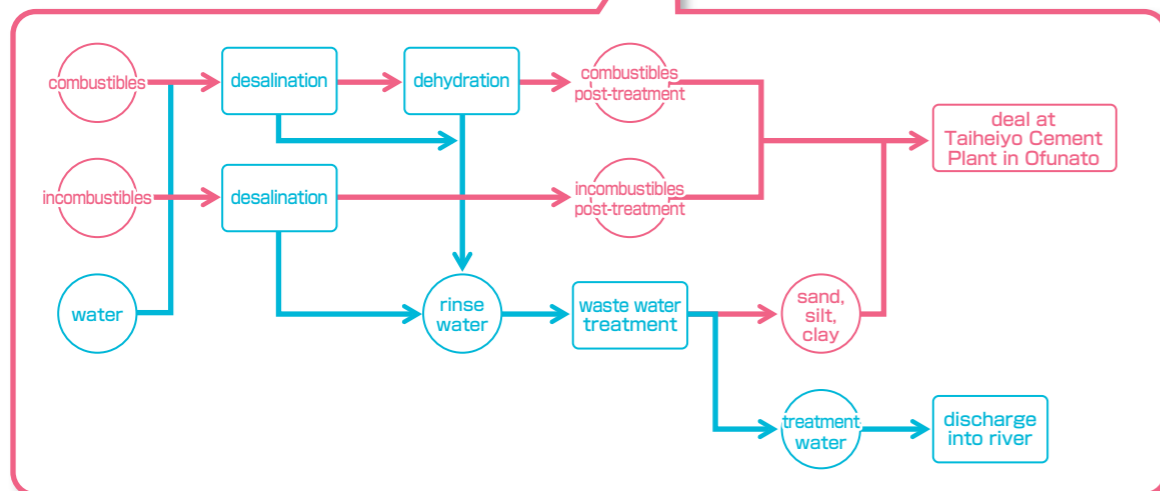


As the result of the tests, "Dipping" is not enough to desalinate so that we ended up with using the equipment like the washing machine for the treatment.

### A whole process



### Flow in desalination facility



We separate the disaster wastes to combustibles and incombustibles at Ofunato plant of Taiheiyo Cement Corporation to remove its chlorine content in desalination facilities.

Post-treatment disaster wastes have lower density of chlorine for 1,000ppm are transformed into materials or fuel in production of cement at Ofunato plant of Taiheiyo Cement Corporation. The water is created by the treatment will be treated to make the density lower than the standard value by waste water treatment technology and afterward, be discharged into rivers.

The desalination facility was built in about 2 months to catch up with production of cement from November 2011. We appreciate the cooperation of Ofunato plant of Taiheiyo Cement Corporation for our establishment. We investigated about the desalination in April and started the operation in about a half year after that. (Our engineers have developed it.)

### The desalination facility



### The waste water treatment facility



#### Voice of our staff

Winter in Iwate is much colder than I imagined. There were so many troubles caused by freezing which I have never experienced in Osaka. Winter had come here right after we started to operate so I had a hard time with the weather and also training of workers.

REMATEC Co.,  
Desalination Group,  
Tomoki Furuya



Since the earthquake, we have been trying to rebuild the disaster areas as soon as possible with cooperation of local companies in Ofunato and Rikuzentakata by treatment and disposal the disaster wastes and their help make it possible to treat the disaster wastes as maximum at Ofunato plant of Taiheiyo Cement Corporation by the desalination facility. We are working very hard so that the facility can help to rebuild the disaster areas by the end of March 2014 which Iwate aims.

# Business Overview

# Reducing of environmental loads

## Thai Project

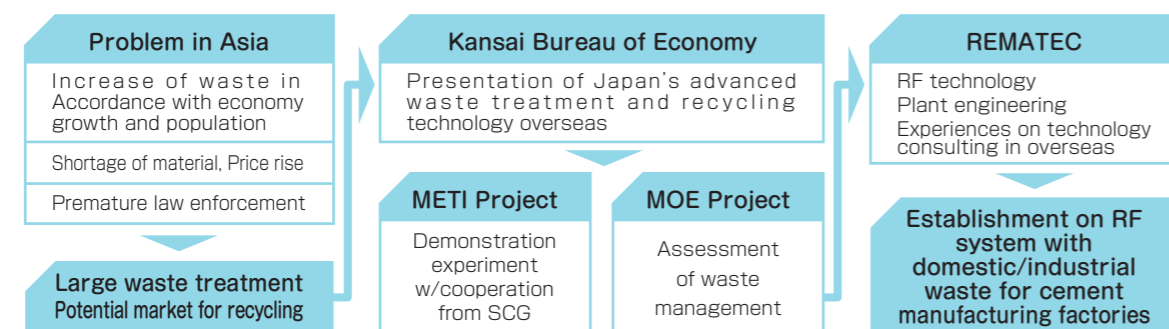
**Demonstration operation for the effectiveness of raw materials from waste to produce cement supplemental fuel with the utilization of RF in Thai cement production chain**

In proportion to the development of economy, businesses and the increase of population in Asia, there is a higher production of waste despite the fact that quantity of resources is decreasing. And most of the wastes are not being processed for recycle use.

On the other hand, with the improvement of waste treatment technology and the enacting of the recycling laws, the awareness of environmental protection in Japan has been changing drastically. We have been working on the assessment on the feasibility for RF operation in Thailand with Kansai Bureau of Economy, Trade and Industry to create the supporting system for the effective usage of recyclable resources and the protection of the environment in

Asia for the purpose of contribution on Japanese economy growth by extending the Japanese venous industry. At a public hearing for the development of environment-friendly industrial park with in Amata Nakorn Industrial Estate, we have found out that the percentage of the material that are being used at cement factories in Thailand is significantly lower than Japan despite of all the recyclable waste from the landfill.

Our focus on the "RF technology", "The plant engineering" and "Overseas training operation" was evaluated by Ministry of Economy, Trade and Industry (METI) and Ministry of the Environment (MOE). We have been assigned by both authorities to do the following tasks.



### Ministry of Economy, Trade and Industry (METI)

With cooperation from Siam Cement Group (SCG), we are conducting the demonstration operation to alternate industrial waste to raw material for cement firing fuel in Thailand. Our main goal is to make ZERO waste in Thai land by consulting and supporting the locals with our RF technology and procedures such as test operation, quality/specification inspection, and verification of the feasibility.

### Ministry of the Environment (MOE)

All wastes should be alternated into 1) Reclaiming Fuel, 2) Biomass recycling, 3) RDF and these procedures lead us to the establishment of 3R system. We are conducting the analysis on the waste types and the governmental measure for both residential/industrial wastes with cooperation from related authorities in Thailand.

The waste problems in advancing countries are very serious as a social challenge, we are going to solve these problems by our technologies for Thai as a model, and would contribute to the realization of global sustainable societies by developing our deals to neighbor countries.



## Commitment for ECO FIRST

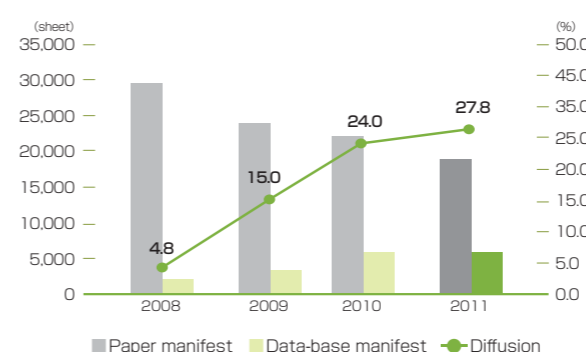
~Approach to global environmental protection as an advanced environmental company~

REMATEC was granted by the Ministry of the Environment as one of the ECO FIRST companies through our commitment in Nov., 2008.

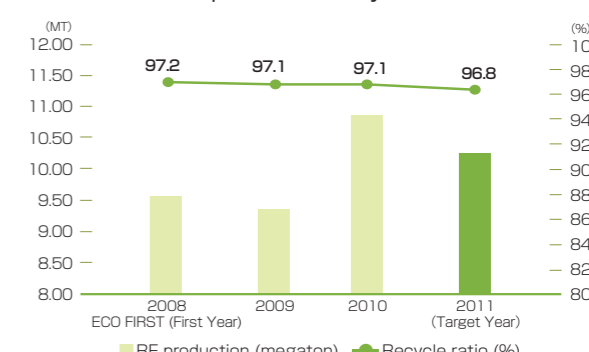


Content	Details	Goals	Results in 2011
1. Facilitation of proper and active recycling	Disclosure	Disclosure on web sites	Temporary disclosure on web site. Info on Grant of excellent treatment companies. See P28
	Manifest (data base)	—	The diffusion 27.8% 2011
2. Promotion of recycling based society	RF Production	Production over 1000000t by 2010	Accomplishment 108,800t procreation
	Contribution by Sub- critical	—	Examples P10
3. Prevention of the global warming	Consumption of fuel on Collection/Delivery Vehicle (basic unit)	9% Reduction by 2012 compared w/2003	Nonattainment 5.2% Reduction 2003
	Reduction of electric usage (basic unit)	25% reduction and more by 2012 compared w/2004	Nonattainment 22.4 % Reduction 2004
4. Prevention of pollution and measures	Facilitation of environmental protection by EMS/OSHMS	—	Examples See P15~18

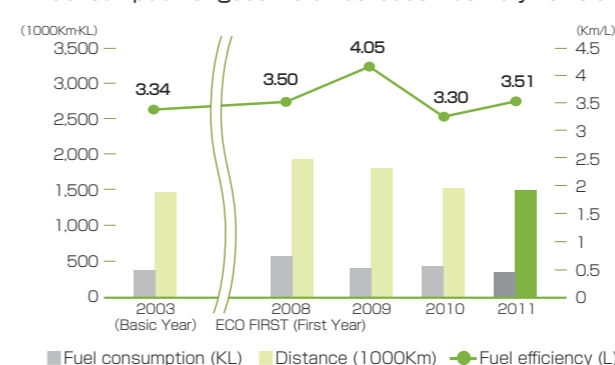
Transition of data-base manifest diffusion



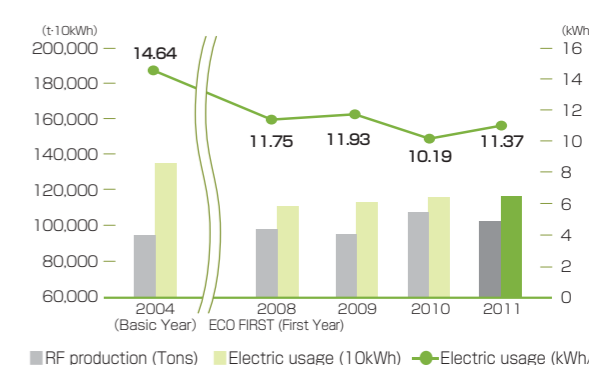
Transition of RF production recycle ratio



Consumption of gasoline on collection/delivery vehicle



Shift of electric usage





# Reducing of environmental loads

## Rematec's principle for the environment

REMATEC recognizes that the protection of environment is the most important task for the better future and the prosperity for all the human being. Therefore, we are committed for the reducing of the environmental loads, energy/resources conservation to keep the environment and the recycling businesses balanced with contribution of the recycling and the construction of better society.

## Social environmental challenges



## EMS Environmental Management System

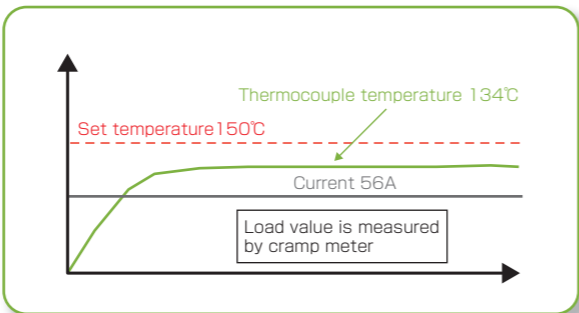
### Improvement of heaters

For the reducing of electric usage, we reviewed the heater we use for the treatment of waste with high viscosity (The device to heat the cans of waste oil). There was no measurement tasks needed to watch the temperature inside the storage so that there was an electric usage for 100% at all time, however, we installed the sensor and the automatic temperature controlling device for the conservation of electricity.



#### 1. Present issue

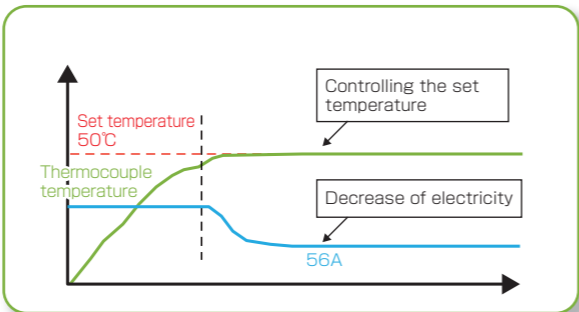
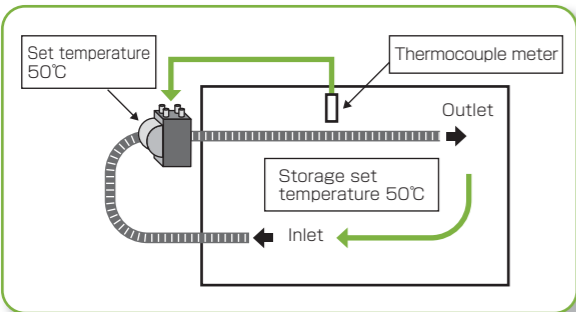
- (1). No measurement status for the temperature in the storage.
- (2). 100% of electric consumption due to the lack of temperature controlling devices.



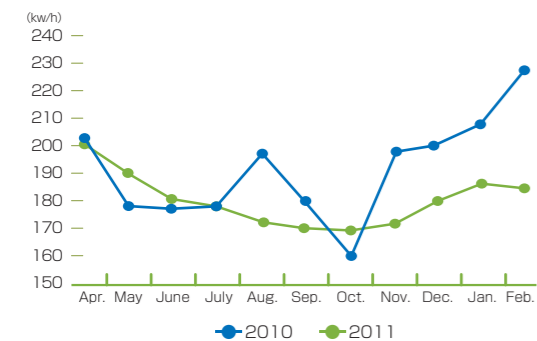
#### 2. The conservation of electricity

The sensor controls and keeps the fixed temperature.

« Suggested thermal behavior »



### 2011 Electric consumption for the heating device



	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Total
Basic Unit (kw/t)	9.2	16.1	12.1	9.2	10.3	9.8	9.1	11.9	10	14.9	13.3	11.3

### Environmental activity in compliance with ISO 14001

Place	Date	Number
Osaka, Sakai SC Plant, RTT Ltd.	03/26/1999	JMAQA-E036
Kyushu Plant	07/18/2000	JMAQA-E115

### Environmental management activities 2011

	Purposes & Goals	Compatibilities for social issues	Operations	Results	Evaluation	Tasks & Goals of 2012
Osaka Plant	Promotion of volunteer activities		Volunteer work (cleanup the harbor) in local community areas	-5 participated for "waste free operation" -10 participated for "Cleanup the harbor" -6 times for "Cleanup the roads around Osaka plant"	○	Encouraging employees to call out
	Promotion of resource saving due to increasing RF consumption (RF consumption was over 56,994 tons a year.)		-Collection of waste by sales and transportation division -A stable system operation by the production division	RF was shipped for 56,994 tons in a year	○	Reducing greenhouse gas by RF transportation to overseas
	Elimination of leakage		-Reconsideration of the procedure manual -Following the rules -A through education with the procedure manual	-2 leakage at our plant -No leakage at the clients' plants	×	-Reconsideration of the procedure manual -Conformation of the procedure and the through education
	Prospecting new clients; over 100		-Investigation in the current clients and expanding of acceptance of waste -Prospecting new clients	52 new clients	×	-Expanding of the acceptance in current clients. -Prospecting major companies
	Reduction of electric energy consumption (Reducing 25% compare to 2004's rate)		Installing energy-saving lights device	-Reduction of the unit consumption rated 46% -Installed energy-saving lights devices	◎	-Installing energy-saving lights device -Reduction of electric energy consumption by using a demand supervision system
Kyushu Plant	No complain for bad-smell from local communities		Enhance communication with neighbors during the community patrol	2 complain for bad-smell from the local communities	×	(Goal) No complain for bad-smell from local communities (Solution) 1. Enhance the community patrol 2. Closing shutters completely during the acceptance of waste 3. Never exposed the liquid to air during pouring it into tanks 4. Improve deodorization system
	Zero Leakage at clients' plants		-Pointing and calling -Prediction of risk by each employee	3 leakages at clients' and our plants	×	(Goal) Zero Leakage at clients' and our plants (Solutions) 1. Reconsideration of the procedure manual in each work division 2. A through education each division
	Promotion of resource saving through stable supply (Goal of RF consumption for 48,000 tons a year.) (Reduction of coal: 29,373t)		-Collection of waste by sales and transportation division -A stably system operation at production division	RF was shipped for 47,115 tons a year (Reduction of coal: 28,831t)	△	Promotion of resource saving through supply (Goal: RF consumption 55,000 tons a year) (Reduction of coal: 33,656t)
	Promoting reduction of CO <sub>2</sub> emissions through less electric energy consumption		-Installing mixing control timer -Green curtains (walls)	-(2010) 11.7kwh/t (CO <sub>2</sub> : 4.50(kg-CO <sub>2</sub> /kwh)) →(2011) 11.3kwh/t (CO <sub>2</sub> : 4.30(kg-CO <sub>2</sub> /kwh))	○	Reduction of electric energy consumption by using a demand supervision system (Goal value: 10.98kwh/t) (CO <sub>2</sub> : 4.20(kg-CO <sub>2</sub> /kwh))
Sakai SC Plant	Production of reclaiming nitric acid which induced prevention of greenhouse gas; 959t a year		Establish more acceptable tanks	Result: 723t (Reduction of greenhouse gas 100.8t-CO <sub>2</sub> )	×	Ensuring the amount of acceptance and work equipment stably
	Achievement for creating new businesses which contribute to solve social issues for the earth. (on each project); 100%		Encouraging the promotion on each project	-NEDO business -Operating joint research project with other companies as a plan	○	Promotion of the recovery project for the disaster areas
	No Leakage		-Reconsideration of the procedure manual -Follow the rules -A through education along with procedure manual	2 leakage at our plant (caused by malfunction)	×	Inspection and repair the equipment along with system management plan



# Action for Safety to support business

**Rematec's principals for safety and health**  
REMATEC recognizes that responsibilities of keeping the security measure to take care of our staff members. That is a very basic fundamental of social task we have and that supports the coexistence among company employees. Our basic principles are "Safety first" and "Comfortable environment".

## OSHMS Occupational Safety and Health Management System

### The holding of Labor safety and health conference

The 15<sup>th</sup> occupational safety and health conference for all offices was held in our Kyushu plant.  
We have had these conferences with the participation of our Osaka plant, Sakai SC plant, and Kyushu plant before, however, we had new addition of our branches of Tohoku, Tokyo, RTT, Technical headquarter, and sales headquarter therefore we had 36 participating employees and executives to this event.  
The remarkable report from our Tokyo branch was referred to the tasks and responsibilities on the recovery of Great East Japan Earthquake and Tsunami disaster areas in Tohoku including all the safety and health measure and efforts to protect our employees at our work sites.  
REMATEC's President, Masatoshi Tanaka referred in his speech, and "There is no such thing as safety guarantees." And that became our project theme on our contribution to victims from the Great East Japan Earthquake and Tsunami, and the accidents at Fukushima nuclear power plant. And we all verified the importance of safety and tasks to support it.

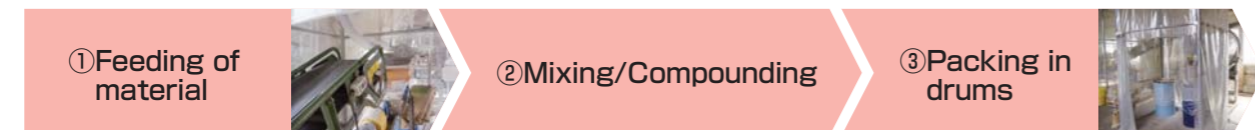
### OSHMS renewal inspection

It has been 3 years since our three plants have been granted for the occupational safety and health management and all three plants have accepted the grant for the renewal in Aug. 2012 after the inspection.  
At our Kyushu plant, the report of accidents for the last 5 years prior to the grant was: 2 accident leave: 1 accident: incident: 4. And for the three years after the grant, there was only 1 incident reported. This result indicates that our efforts for the hazardous material removal, self-checking duties and the education are being successful.

### Safety activities at Sakai SC plant

From Oct. 2011, we started a production of flocculants upon the request of our Tohoku branch.  
Here we would like to introduce some of our examples of risk-prevention affect we focused for the building of flocculants production machine.

**Flocculants production flow** : Production is being conducted in accordance with the flow showed below.



#### Accident Prevention Example ①

##### The accidents from material feeding

Feeding duties can be very dangerous due to the pivot in flocculants production machines. Some operators have got their hands and sleeves stuck inside the machine.

Number of accident	Possibility	Severity	Total	Accident level
4	4	6	14	IV

Installed a metal piece so that hands and sleeves won't get struck.

Number of accident	Possibility	Severity	Total	Accident level
1	1	6	8	II



Installation of a metal piece

#### Accident Prevention Example ②

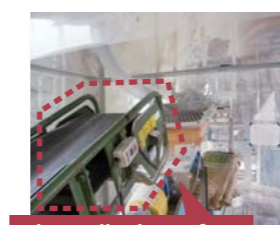
##### Employees get back pain symptoms

The inlet for the flocculants production machine is located 2m high from the floor, the material feeding required some employees pick up the material bags that weigh more than 20kg, caused back pain in some people.

Number of accident	Possibility	Severity	Total	Accident level
6	6	3	15	IV

Installed the belt convey so that machine does all the feeding.

Number of accident	Possibility	Severity	Total	Accident level
1	1	3	5	I



Installation of the belt convey

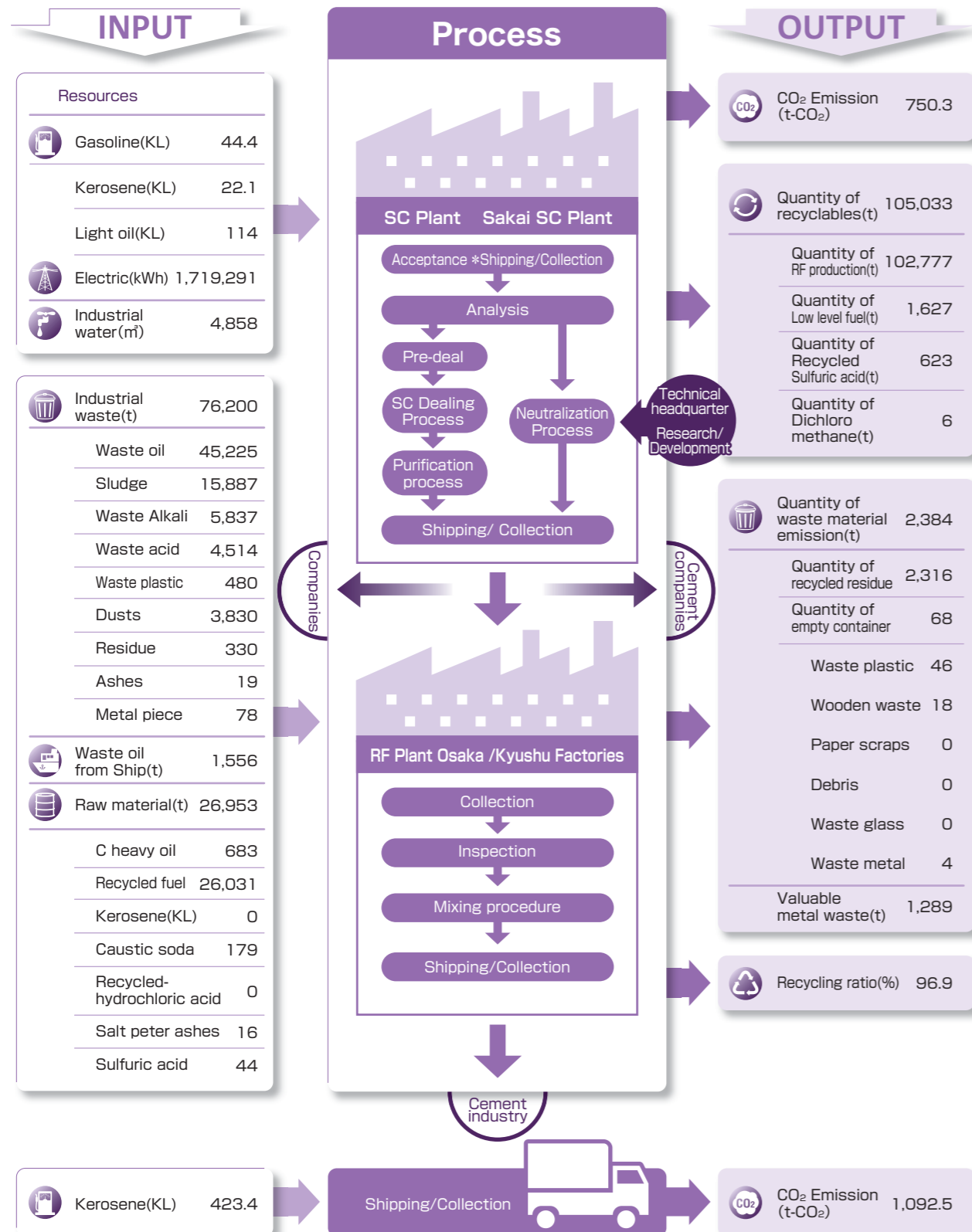
## Safety and Health activities 2011

		Purposes & Goals	Plans	Results	Evaluation	Tasks & Goal of 2012
Osaka Plant	Safety	-No Accident that require time off from work -No Accident that	-Reconsideration of the procedure manual and dissemination of rules -Enhance patrol by the manager	- No Accident that require time off from work -No Accident through near injury (same as similar one)	○	-Promoting "my machine & my area" which means be responsible for your own work environment -Creating a procedure manual, review and training -Improvement activities by risk assessment
	Health	The achievement rate of personal goals for health : more than 85%	-Setting the personal goal for health -Promoting activities for mental health	-The achievement rate of personal goals for health marked 82.6% -The rate of doctor's observation needed 62.5%	×	-Health advice to the worker who need doctor's examination -Encouraging each worker for checkups
	Prevention of disaster	No accident by the malfunction	Eliminating the malfunction with regular inspection and conservation	2 leakage by malfunction	×	-Inspection and repair the equipment along with system management plan
	Transportation	100% completed training for emergency cases -No traffic accidents causing injury or death	Training of postulated accidents and disaster -Training for prediction of risk on traffic -Ensuring safety during forklift operation	-Fire drills -Postulated earthquake drills -3 traffic accidents causing property damage in our property -No traffic accidents causing injury or death	◎ ×	-Evacuation drills for earthquake and Tsunami -Reconsidering the procedure manual and through education
Kyushu Plant	Safety	No work-related accidents Zero Leakage at clients' plants	Practicing risk assessment each area (what the risk assessment should be) →Reducing risks  Completing a standard operation manual (What the standard operation manual should be) → Procedure of all operation is determined  Keep and through 4S (What the 4S should be) → Keep tidng and cleaning  Skill-up training	-1 incident -No accidents for 2 years and 10 months  Reconsidering due to the plan -454 reconsidered -13 new subjects  Determined a person who is charged "my area" and put his picture at plant  Monthly training	○	Prevention of the risk assessment be in a rut is needed →Practicing risk assessment during reconsidering the standard operation manual  Putting up the pictures doesn't correspond to 4S activities →Model workplace activities of 4S ( introducing the commendation )
	Health	The achievement rate of personal goals for health : more than 85%	Prevention of creating harmful materials by new business  Corresponding personal goals for health to result of medical examination Organizing the standard related to mental health Reduction by half of long-hour (over 60 hours) workers	Risk evaluation and strategy due to installing "clean star 7"  The achievement rate of personal goals for health : 85.0%  Creating the standard 71 long-hour workers →28	○	Increasing the workers who need to go to doctor through special examination for organic solvent →Checking the fit of masks ※Considering for install automation system for drum yard operation
	Prevention of disaster	Emergency evacuation drill if the manager is out	Emergency evacuation drill if the manager is out during night time and his day off	-Report training for earthquake (9/11) -General training for fire (11/14)	○	Reconsideration of standard for earthquake and fire drills
	Transportation	-Zero traffic accident -Zero traffic violation	Not having an optimistic expect during driving  Encouraging to operate "my machine" activities on vehicles	-Employees: damaged vehicles (2 cases of damage/3 cases of both), 4 cases of damaged facilities -Partner companies : 1 violation, 1 damaged property Practiced 4S on vehicles through transportation QC activities	×	-Driving carefully -Traffic accident and violation; less than 3
Sakai SC Plant	Safety	No work-related accident	-Reconsideration of the procedure manual and dissemination of rules -Enhance patrol by the manager	1 accidents that require time off from work and nearly injury (Light chemical injury by acid)	×	-Promoting "my machine & my area" which means is responsible for your own work environment -Creating a procedure manual, reconsideration and training -Improvement activities by risk assessment
	Health	The achievement rate of personal goals for health : more than 85%	Setting the personal goal for health	The achievement rate of personal goals for health marked 86%	○	Health advice to the worker who need doctor's examination and developing to the goal
	Prevention of disaster	Preparation for emergency cases in large-scale disaster	Training of postulated earthquake and fire	-Fire drills -Postulated earthquake drills	○	Evacuation drills for earthquake and Tsunami
	Transportation	Zero traffic accident and violation	Training for prediction of risk on traffic	-1 violation -2 damaged properties by themselves	×	Encourage to safety drive and protective drive -Training for prediction of risk on traffic -Examination of driving appropriation



# Data on each work site

## Material flow of environment responsibilities 2011



## Data on each work site 2011

**INPUT**

**Environmental performance data for RF production**

	Total	Osaka	Kyushu	Sakai SC
Gasoline(KL)	44.4	10.5	28.6	5.3
Light oil(KL)	22.1	11.2	8.4	2.5
Kerosene(KL)	114	0	0	114
Electricity(kWh)	1,719,291	506,703	661,826	550,762
Industrial water(m)	4,858	-	-	4,858
Industrial waste(t)	76,200	40,113	34,217	1,870
Waste oil	45,225	27,187	17,572	466
Sludge	15,887	6,329	9,558	0
Waste Alkali	5,837	3,753	1,923	161
Waste acid	4,514	2,247	1,024	1,243
Ashes	19	0	19	0
Waste metal	78	0	78	0
Ship Waste oil(t)	1,556	0	1,556	0
Raw materials(t)	26,953	14,714	12,000	239
C heavy oil	683	0	683	0
Recycled fuel	26,031	14,714	11,317	0
Kerosene(KL)	0	0	0	0
Caustic soda	179	0	0	179
Recycled-hydrochloric acid	0	0	0	0
Salt peter ashes	16	0	0	16
Sulfuric acid	44	0	0	44

**Breakdown**

	Total	Osaka	Kyushu	Sakai SC
CO <sub>2</sub> Emission (t-CO <sub>2</sub> )	750.3	202.4	343	204.9
Quantity of recyclables(t)	105,033	55,662	47,115	2,256
Quantity of RF production(t)	102,777	55,662	47,115	0
Quantity of Low level fuel(t)	1,627	0	0	1,627
Quantity of Recycled Sulfuric acid(t)	623	0	0	623
Quantity of Dichloro methane(t)	6	0	0	6
Quantity of waste material emission(t)	2,384	1,285	1,069	30
Quantity of recycled residue	2,316	1,278	1,027	11
Quantity of empty container	68	7	42	19
Waste plastic	46	3	24	19
Wooden waste	18	4	14	0
Paper scraps	0	0	0	0
Debris	0	0	0	0
Waste glass	0	0	0	0
Waste metal	4	0	4	0
Valuable metal waste(t)	1,289	632	622	35

**Recycling ratio(%)**

	Total	Osaka	Kyushu	Sakai SC
Recycling ratio(%)	96.9	96.8	96.9	99.4

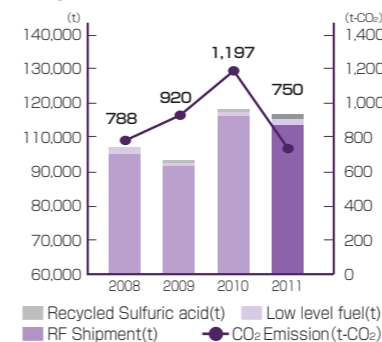
**Calculation formula**

$$\text{Recycling ratio(\%)} = \frac{\text{Collected amount} - \text{residue}}{\text{Collected amount}} \times 100 = \frac{\text{Collected waste} - \text{Empty Container} - \text{recycled residue}}{\text{Collected waste} - \text{Empty container}} \times 100$$

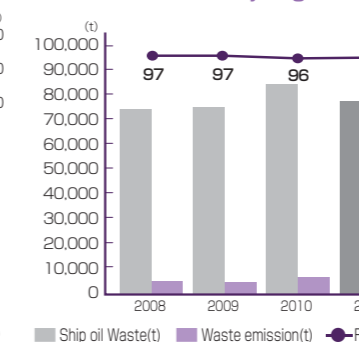
**Environmental performance data for collection/delivery**

	Total	Osaka	Kyushu
Kerosene usage(KL)	423.4	155.4	268.1
CO <sub>2</sub> Emission (t-CO <sub>2</sub> )	1,092.5	400.9	691.6

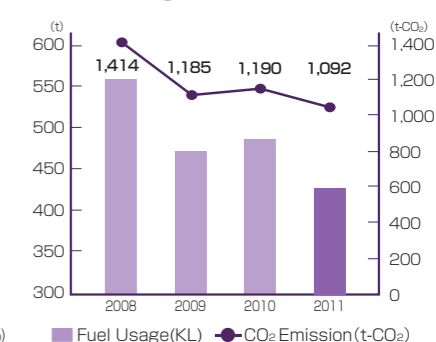
Recyclables amount and CO<sub>2</sub> Emission



Waste amount and recycling ratio



Kerosene usage and CO<sub>2</sub> Emission



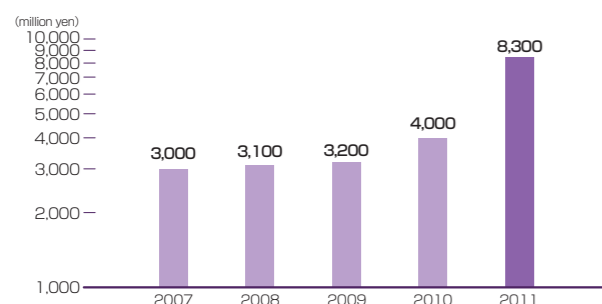
# Company's data figure

# Communication

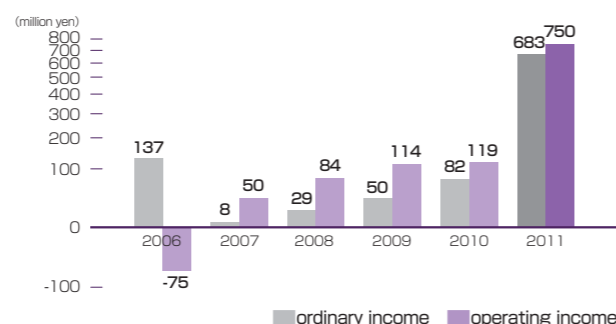


## Finance

Total profit

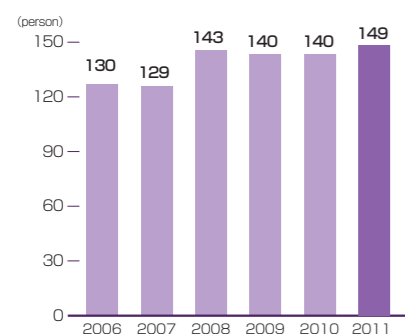


Sales profit and current profit

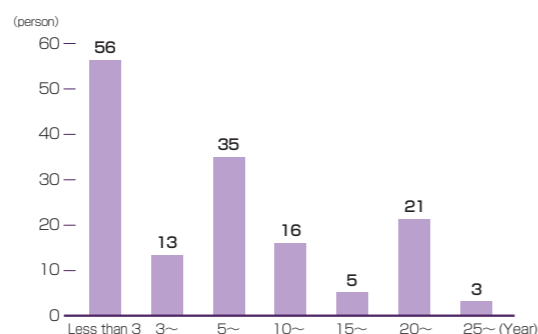


## HR Data

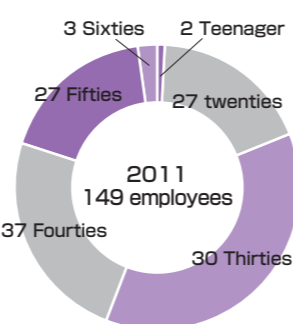
Shift of employee's number



Years of employment



Age bracket



## REMATEC CO., CSR Report Outline

### Subject Term

01/April/2011~31/Mar/2012  
\*Also reported for the term prior to May/2011 and after April/2012

### Subject Organization

REMATEC Co.,  
RTT (Rematec Transit Trade) Corporation

### The date of Publication

Oct/2012

### Publication History

The CSR report has been published annually since 2000.



### Discloser

This report is to indicate REMATEC Co.'s CSR activities and projects. Please visit our web site:  
<http://www.rematec.co.jp>

### Reference Guidelines

GRI: Sustainability Reporting Guideline  
Ministry of Environment:  
Environmental Report 2007  
Environmental Accounting 2005  
Guidelines for Measures to Prevent Global Warming

### For questions and inquiries;

report@rematec.co.jp  
4F Honcho Heisei Bldg.  
1-2-12, Itachibori, Nishi-ku, Osaka-city 550-0012

### Qualification

This publication includes reports from present/past as well as the business prediction, plans, and strategies. Make a note that results of predictions may vary accordingly to changes of conditions.

## Commentary from clients



### REMATEC is our good partner for the creation of our recycling based society

Nippon Steel & Sumitomo Metal Corporation, OITA WORKS  
Environmental Control Dept. Safety, Environment & Plant Safety Div.,  
Senior Manager,

Mr. Hiroyuki Yoshida

Here at Nippon Steel & Sumitomo Metal at Oita Works, we import the various kinds of raw materials from overseas to produce steel sheets and plates that are used to build vehicles, electronic appliances, shipping and construction machinery and export them worldwide.

Our environmental activities are;

- 1) Eco procedure - Production of steel with the world's top class efficiency and lowest CO<sub>2</sub> emission
- 2) Eco products - Contribution on energy/CO<sub>2</sub> reduction before the products are made.
- 3) Eco solution - Presentation of conservation technology and the protection technology

We have been contributing to build infrastructures of sustainable society under our principles of "001 (0 accident, 0 pollution, 1<sup>st</sup>-class steel plant) aiming the safest "greenery & water" plant cause of our plant being located in the central area of the city, and we are dealing industrial waste and by-product from a perspective

of 3R (Reduce, Reuse, Recycle) working on circulating society.

Then we are working with REMATEC's Kyushu plant in Oita plant to recycle all the industrial waste generated at our factories. REMATEC principles are very similar to ours and they give us the sense of reassurance because we are all aware of REMATEC's efforts to their projects and their sincere work ethics.

We always receive immediate attention and professional support from Rematec in any case of irregular industrial waste. They are the first ones to be at the work sites and our great partner to achieve the goal of the creation of the recycling based society.





# Communication

## Commentary from clients



### Attitude towards searching possibilities of recycling to new resources

COW BRAND SOAP KYOSHINSHA CO., LTD., Engineering Works Div.,  
Sub Manager,

**Mr. Satoshi Yamada**

At Yasuda factory of COW BRAND SOAP KYOSHINSHA CO., LTD., we produce beauty soaps in "red box" and "blue box" which are our signature products, "Milky body soap", series of "Kewpie Baby" and "additive-free" soap and also products for hair and skin.

We are trying to provide the products that are gentle and safety for skin, especially the beauty soaps are made by "kettle-cooked" is our traditional method. The "kettle-cooked" produces waste soap water as by-product. We call it "kansui" and capture glycerin and salt from it to reuse. As well as the production has been increased (we have to appreciate it), "kansui" has been naturally increased so that the capacity of treatment in the facility was exceeded. The first time we contacted to REMATEC was for a request about a treatment of the exceeded "kansui".

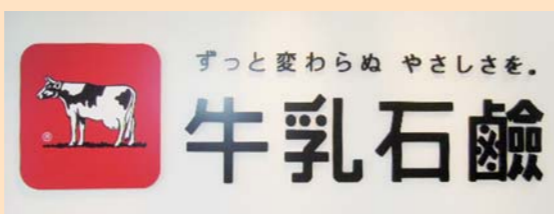
REMATEC is not only "a company that can totally treat waste" but also "a company that has technologies to transform waste into resources and also has been studying for making it better" as the name of company

says. I have found them when I visited their treatment facility for starting of the business.

Producing "useless waste" is not avoided in a manufacturing industry. That is inevitable but we prefer not to just dispose the waste. I think we have to have an attitude towards searching possibilities of recycling to new resources which I am trying to make it real. We would like to keep a good relationship with REMATEC and looking forward to working with them.

\*If you are interested in the "kettle-cooked" method or our products, please visit our site.

<http://www.cow-soap.co.jp/web/english/>



## Commentary from community



### Accomplishment of social mission by the treatment of disaster waste

TAIHEIYO CEMENT CORPORATION, OFUNATO PLANT,  
General Manager,

**Mr. Kunihiro Ando**

As a long-term CSR vision, Taiheiyo Cement Corporation set "Conducting a basic of society with safety and secure", "Building a recycle-based society" and "Activating social community". Ofunato plant was hit hard by the Great East Japan Earthquake but by end of this June, was recovered as the same system we had before the earthquake.

Currently we are operating "supply cement for material of rebuilding" and "recycle disaster waste into resources".

Since right after the earthquake, REMATEC has started to involve in the treatment for disaster waste based on their experiences on the Great Hanshin Earthquake.

I think that current disaster waste treatment schemes in Ofunato and Rikuzentakata are led by REMATEC as the consequences. For

recycling the disaster waste into resources for cement, it was challenging on baking cement and desalination treatment for the disaster waste. I entrusted the desalination to REMATEC. With their decisiveness, skills to develop and their dynamic energy, they operate about 1,000 tons per day to recycle huge amount of disaster wastes into resources for cement. Since REMATEC's energy, characteristics and qualities of the treatment for disaster waste can be changed rapidly, even trials and errors are needed in the treatment for disaster waste. I believe REMATEC can correspond to it with their technology and action. We will keep working hard for rebuilding the disaster areas with REMATEC.





# Communication

## Commentary from community



### To carry on the mainstay of the disaster waste treatments

Rikuzentakata City Office, Construction Div. Roads/River improvement Section, Section Chief,

**Mr. Makoto Kanno**

The Great East Japan earthquake and tsunami caused countless damages

on our city, Rikuzentakata and the other places in Japan. Many people lost their love ones and their homes. All the debris from the quake were all over the place and we needed to remove them as quickly as possible so that we could continue our searching/rescuing and the deliveries of relief supplies to the victims and that very important tasks led us to other issues of the disaster recovery project-removal of debris.

Although my team was assigned to the removal duties, we did not quite understand what to do, because we only had have dealt with civil engineering and construction

industry. That was when REMATEC came into the place where I believe that was the very beginning of the recovery of our city.

REMATEC has been giving us the assistance for planning, constructing, and management of the waste treatment plants, the temporary storages, secondly sorting machines and many more.

Total amount of the debris in our city are approximately 1,500,000 tons, and we have managed to process 250,000 tons so far (as of Sep, 2012), that is 17% of our objectives. We are planning to take care of the rest by the end of May, 2014.

I would like to thank REMATEC for all the dedicated employees and their efficient work performance to make it all possible to carry on the mainstay of the disaster waste treatments.

## Commentary from community



### REMATEC has given my guys such a great impact !

The Association of Construction Industry of Iwate, Ofunato Branch, Branch chief,

**Mr. Ken Kinno**

The huge earthquake was occurred on 11, May, 2011 left so many

damages in all areas along the coast line in Iwate, Kesen (Ofunato, Rikuzentakata, Sumita).

REMATEC's first task was to select a place for the temporary storage quickly and a year and 6 months later,

Most of debris are removed and processed at TAIHEIYO CEMENT Co., OFUNATO to recycle them into a raw material for the cement production industry. And its recycling ration more than 50%.

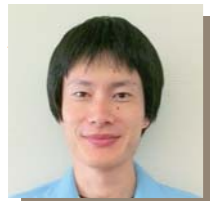
These gentlemen actually came from Osaka and have been put through a lot also, however, the motivation and willingness to get the operation done was excellent and

impressed all of my guys at the association of Ofunato.

They also created a lot of job opportunities in our city and they are one that we can trust.

I would like a continuous help from REMATEC to make our city debris-free in near future.

## Commentary from employees



REMATEC Co., Technology Div. Biotech Driver Dept., **Takashi Sugimoto**

This is my second year working as a technical developer for Bio Energy (BE) at REMATEC.

I am grateful to be a part of the project for the recovery from The Great East Japan earthquake and tsunami,

And I have been working very hard to solve the issues on energy demands/supplies.

REMATEC is a very interesting company to

work for because its real business is also its CSR and Corporate value for the corroboration of natural environment and human prosperity, keeping advanced technologies and making quick decisions. All of our employees are so much fun to work with, and they are all motivated. I would like to contribute REMATEC to be the best in the industry addressing technology development of recyclable energy to create a safer and more comfortable society.



REMATEC Co., Business Strategy Div. Information System Dept., Senior Manager, **Kenichi Watanabe**

Volunteering in disaster areas after The Great East Japan earthquake and tsunami changed my whole life.

Coming from the industry that consumes all the products for profits to the industry that creates recycling based society with organic/industrial wastes - that was a major reason of my participation in REMATEC had the same principle of my direction.

REMATEC's mission and principle are easy

to understand but carrying profound meaning and messages. I truly admire the REMATEC's policy and principle that is based on the strong desire to build the new system of society.

The challenges towards "Unpredictable future", sharing of a "Walking path", and forming of the "Co-creation group" is the image that I have for REMATEC and I am looking forward to seeing our company as a true "Visionary company".

## Commentary for REMATEC's CSR report



Japan Association of Environment and Society for the 21st Century,  
Co-chair,

Mr. Saburo Kato

This is the 13<sup>rd</sup> time I make commentary for REMATEC's annual CSR report. I feel it is much improved as using bigger letters and reducing volume of contents to be readability for all ages so that I made feedback asking consideration for "readers" last year.

REMATEC has been holding their concept high that "Innovation for the Earth", to be more exact, it has been explained that they try contributing build not only recycling-based society but also sustainable social system challenging to develop new technologies and business model to push paradigm-shift. This year, this Report has given me an impression that they have been expanding their business successfully in terms of both of realm and region since their new business is ongoing in overseas.

They have made efforts to improve newer businesses such as bio-energy, not only dealing with industrial waste mainly through innovating and providing more effective ways of recycling. It means the "Core" of REMATEC to contribute society through

recycling resources from the Earth. Their CSR report can let us know what they are doing in their business market.

Also, it has made steady advances to start up Reclaiming Fuel business overseas, mainly in Thailand. This project has improved enough as to have negotiations with Ministry of Economy, Trade and Industry (METI) and Ministry of the Environment (MOE) of Japan.

As for self-evaluations of REMATEC's achievements, which they make every year, they have given a bit severer results compared to past years. For example, they have given themselves 6 "bad" grades out of 12 items in environmental management. Most of the items evaluated "bad" don't mean serious failures, however, they still need to make efforts for the upcoming years.

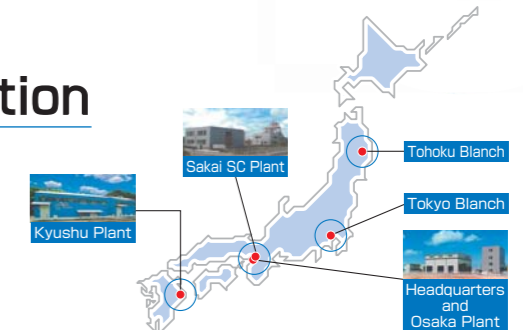
Lastly, I must comment that CSR report itself has been brushed up significantly since last year.



## REMATEC corporation

foundation: 10 November 1974  
capital: 100 million Yen  
number of employees: 149 (at 31 March 2012)  
correspondent banks: Bank of Tokyo-Mitsubishi UFJ, The Senshu Ikeda Bank, Development Bank of Japan, The Shoko Chukin Bank, The Bank of Iwate, Oita Bank  
main business: ● Processing, collecting and transporting of industrial waste  
● Dealing with recycled products  
● Designing, building and dealing with plants for recycling industrial waste

● Entrustment business: consulting, technical tutoring, educating engineers to deal with machineries for recycling waste  
● Engineering recycling industrial waste  
● Cleaning pits and tanks (including oil&water separating tanks)



REMATEC Corporation	
Headquarters and Osaka Plant	11-1 Jizohama-cho, Kishiwada-shi, Osaka 596-0015, Japan Tel:+81-72-438-6434/Fax:+81-72-422-3617
Tokyo Branch	10F Nittochi-Uchi-saiwaicho Building, 1-2-1 Uchi-saiwai-cho Chiyoda-ku, Tokyo 100-0011, Japan Tel:+81-3-3503-7030/Fax:+81-3-3503-7033
Tohoku Branch	3F Odori Building, 1-6-19 Odori Morioka-shi, Iwate 020-0022, Japan Tel:+81-19-681-7391/Fax:+81-19-681-6392
Kyushu Plant	906 Oaza-Tohara, Nozu-cho Usuki-shi, Oita 875-0211, Japan Tel:+81-974-32-7721/Fax:+81-974-32-7731
Sakai SC Plant	4-2-4 Chikko-Shinmachi, Nishi-ku Sakai-shi, Osaka 592-8331, Japan Tel:+81-72-280-0525/Fax:+81-72-280-0526
Hon-machi Office	7F Hon-machi Heisei Building, 1-2-12 Itachibori Nishi-ku Osaka-shi, Osaka 550-0012, Japan Tel:+81-6-6532-0722/Fax:+81-6-6532-0566
Headquarter of Sales Department	4F Hon-machi Heisei Building, 1-2-12 Itachibori Nishi-ku Osaka-shi, Osaka 550-0012, Japan Tel:+81-6-6538-0722/Fax:+81-6-6538-0733

Affiliated company	
TRY-S Co., Ltd.	18 Takumi-cho Sakai-ku Sakai-shi, Osaka 590-0908, Japan Tel:+81-72-320-9238/Fax:+81-72-320-9239

Group corporations	
REMATEC Clean Corporation	
Address	2F Wako-Building, 1-9-23 Yanagi-cho Moji-ku Kitakyusyu-shi, Fukuoka 800-0025, Japan Tel:+81-93-371-3340/Fax:+81-93-371-3074
foundation	1 April 2005
capital	10 million Yen
stockholder	REMATEC Corporation (100%)
number of employees	24 (at 1 April 2011)
correspondent banks	Bank of Tokyo-Mitsubishi UFJ, The Bank of Fukuoka, The Nishi-Nippon City Bank
main business	Cleaning fuel tanks, Cleaning ducts of plants, Cleaning inside pits et al, Refilling catalysts at periodic maintenances
main customers	NIPPON STEEL & SUMIKIN Eco-Tech Corporation TOHO Industrial Co., Ltd., M-Commerce K. K., Cactus Corporation, Nissin Kogyo Co., Ltd., REMATEC Corporation
characteristics	Cleans fuel tanks (mainly of oil or coal) with the latest machineries and technology Customers nationwide, including national base of oil stock Makes best safety measures and improvement of work environment

RTT Corporation	
Address	4-2-4 Chikko-Shinmachi, Nishi-ku Sakai-shi, Osaka 592-8331, Japan Tel:+81-72-280-0672/Fax:+81-72-280-0673
foundation	24 June 2010
capital	9 million Yen
stockholder	REMATEC Corporation, Sangi-Tuun Co.,Ltd.
number of employees	22 (at 1 April 2011)
correspondent banks	Bank of Tokyo-Mitsubishi UFJ, The Senshu Ikeda Bank, The Shoko Chukin Bank
main business	Cargo transportation, Collecting and transporting industrial waste, Cleaning pits and tanks (including oil&water separating tank), Staffing

### Certified as an excellent waste treatment company by Authorization System

#### What is the Authorization System for excellent waste treatment companies?

The evaluating system for the authorization of excellent waste treatment companies that passes all inspection and qualifications.

#### Qualification standards are below:

- 1. Experiences and compliances** The candidate must hold more than 5 years of waste treatment experiences without receiving any adverse disposition
- 2. Disclosure of Businesses** The candidate must have disclosure access for the public for perusals.

- 3. Environmental efforts** The candidate must have a grant from either ISO14001 or Air connection 21
- 4. Data manifests** The candidate must have the data manifest utilization
- 5. Soundness of finance** The candidate must be able to indicate the soundness of all financial matters

Please go to the ministry of environment web site for more information; <http://www.env.go.jp/recycle/waste>