

# Environmental Activity Report

Kinugawa Rubber Group Company 2015



鬼怒川ゴム工業株式会社  
KINUGAWA RUBBER INDUSTRIAL CO.,LTD.

## Editorial Policy

This report is edited to explain Kinugawa Rubber group companies' policy and efforts to environment for stakeholder

### Contents

- P2 Editorial Policy and Contents
- P3 Top Message, Environmental Philosophy and Policy
- P4 Subject Companies for Report
- P5 Outline and Sales Transition
- P7 Environmental Management System and Promoting Organization
- P8 Middle-term Environmental Target
  - ・ P9 CO2 Emission Volume (Energy Consumption)
  - ・ P11 Industrial Waste Volume
  - ・ P12 VOC (Volatile Organic Compound) Generation Volume
- P13 Global Environment Data (Water Resource Intake Volume, CO2 Emission Volume, Industrial Waste Volume)
- P13 Other Environmental Data
  - ・ P13 Prevention of Discharge of Air Pollutant
  - ・ P14 PRTR
  - ・ P15 Material Balance
- P16 Cooperation with Community and Contribution to Society

### ■ Top Message

**We ensure to achieve our contribution to society through “Pursuit of satisfaction from customers” and “Effort to CSR”.**

Our group companies have been developing with world automotive industry from our initiation in 1939, through our rubber ad resin products for automotive. We consider “to manufacture products customers can trust” as a first priority principle, and deliver establishment of highest technical capability and highest quality products manufacturing from each of our processes, from development and design to final products in all the plants (Japan, China, USA, ASEAN, and Russia), to respond any needs from customers. Now we earn the high trust of Euro-American automotive manufacturer, not only the trust of Japanese automotive manufacturer.

We set medium-term environmental target as “Reduction of CO2 emission by base unit, final disposal rate of industrial rate, and VOC emission volume” and hold activities to achieve the target.

Especially, we regard the “reduction of CO2 emission by base unit” as the most important theme for countermeasure for global warming. With the extensive expertise in manufacturing and high-polymer technologies we have garnered through our experience in the automotive industry, we all promote activity to reduce energy by for manufacturing by weight saving /resinification of products, introduction of energy saving machine and lowering of in-process defect. We promise to supply forward, environmental-friendly, and high quality products to customers, pursue the satisfaction of customers, and contribute to society continuously

Sadao Sekiyama, President of Kinugawa Rubber Industrial Co.,Ltd.

関山定男



## ■ Environmental Philosophy

We recognize environmental global conservation as the most important world problem, and contribute to enriched and conformed society through activities that propose vital life.

## Environmental Policy

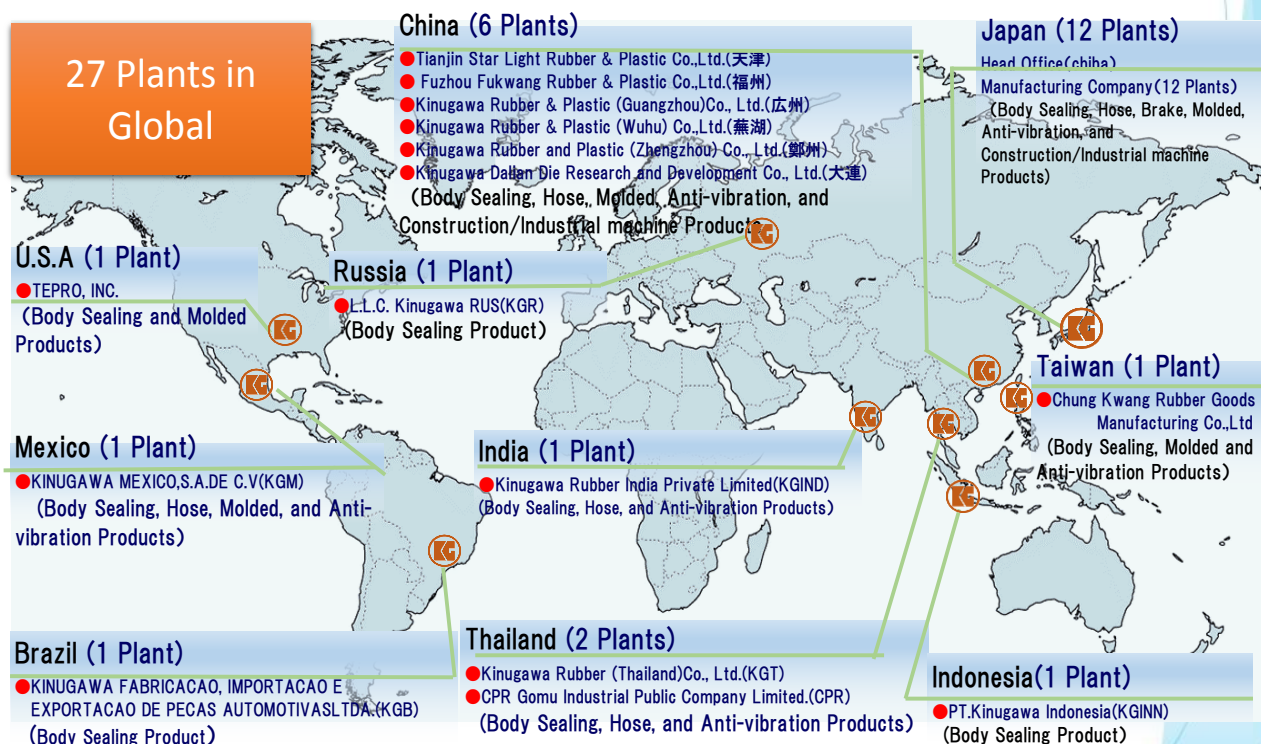
We set the slogan “Clean Environment for Our Children” and apply it to all the activities for environmental conservation.

- A) We understand the effects to the global environment that our business activity provides, set target for environment conservation that is possible in terms of technical and economic, and do our best to conserve global environment, proceeding prevention of pollution and continuous improvement.
- B) We aim energy and resource saving, and reduction of waste and substance of concern in terms of manufacturing, for accordance with environment and society.
- C) We promise to comply related regulations, agreement and other requested items that we agreed, establish self-regulation that is possible in terms of technical and economic, and address to environment conservation.
- D) We consolidate and manage our organization so that each division and each employee can take activity to promote our environment conservation.

## ■ Subject Companies for Report

Subject Companies for Report: 12 plants (domestic) and 13 plants (oversea)

Period Subject to: From April 2014 to March 2015(domestic), January 2014 to December 2014(oversea)



## ■ Company Outline

Company Name KINUGAWA RUBBER INDUSTRIAL CO.,LTD.  
Establishment October 1<sup>st</sup>, 1939  
Capital JPY 5,654,000,000 (March 31, 2015)  
Sales Amount Consolidated: JPY 76,100,000,000  
Non-consolidated: JPY 34,000,000,000 (March 2015)  
Numbers of authorized share 67,299,522 (March 31, 2015)  
President and Top Executive Officer Sadao Sekiyama  
Headquarters 330 Naganuma-Cho, Inage-Ku, Chiba City,  
Chiba, 263-0005, Japan  
Phone: 81-43-259-3111  
Number of Employee Consolidate: 4,134 Non-consolidate: 298 (March 31,2015)

## ● Business Outline

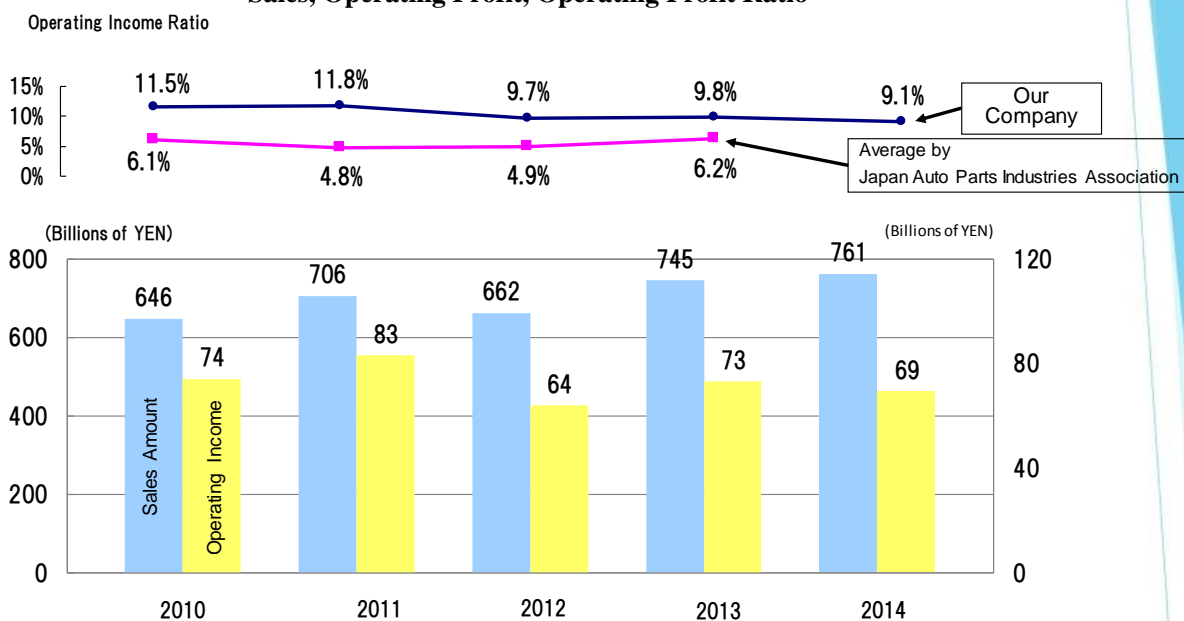
1. Manufacturing and sales of rubber and resin product for automotive and other machine
2. Production, sales, and repair of machine and equipment for rubber and resin products
3. Production, sales, and repair of metalworking machine
4. Interior construction, and contract work of tile, brick, and block construction
5. Lease, dealing, mediation and management of fixed/movable property
6. Sales and lease of Information Communication equipment
7. Land transportation, warehouse, and packing business
8. Casualty Insurance agent business and operations regarding Life Insurance

## ● Main Customers

Aichi Machine Industry Co.,Ltd.  
F-TECH INC.  
Calsonic Kansei Corporation.  
Kasai Kogyo Co., Ltd.  
JATCO Ltd.  
Suzuki Motor Corporation.  
Daihatsu Motor Co.,Ltd.  
Toyo Tire & Rubber Co.,Ltd.  
Nissan Kohki Co., Ltd.  
Nissan Shatai Co.,Ltd.  
Nissan Motor Co.,Ltd.  
Hitachi Automotive Systems,Ltd.  
Faltec Co.,Ltd.  
Volkswagen AG  
Fuji Heavy Industries Ltd.  
PRESS KOGYO Co.,Ltd.  
Bosch Corporation.  
Horigarasu Co.,Ltd.  
Honda Motor Co.,Ltd.  
Mitsubishi Motor Corporation.  
MEIJI SANGYO COMPANY  
UD Trucks  
Unipres Corporation  
YOROZU CORPORATION.

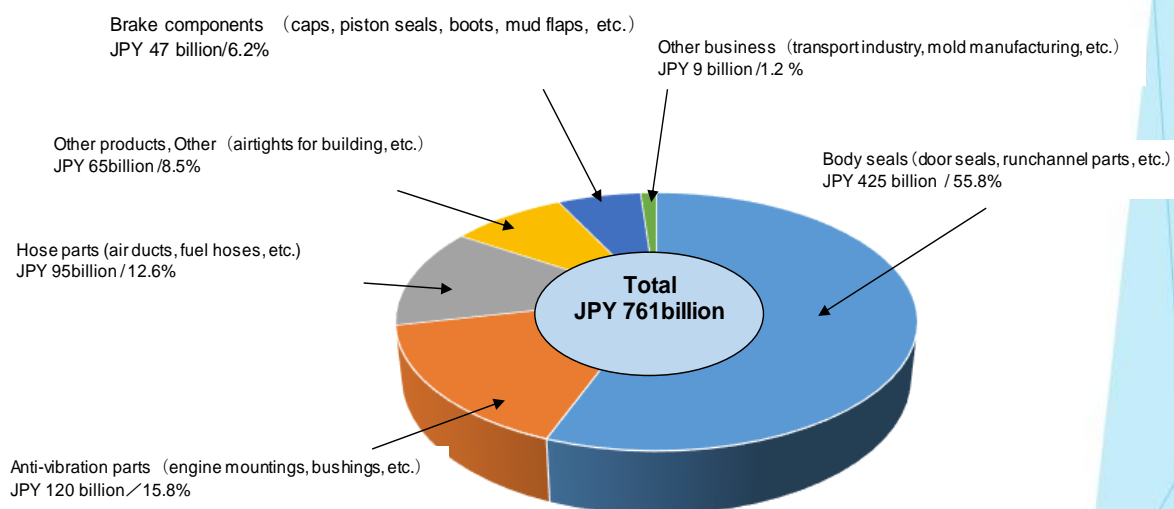
## ● Business Record

### Sales, Operating Profit, Operating Profit Ratio



## ● Sales Proportion of Products (March 2015)

### Sales Amount and proportion of Products



## ■ Environmental Management System of Group Companies

We've obtained certification of Environmental Management System (ISO14001) in our main plants in domestic/overseas.

**Acquisition status of ISO14001 certification**

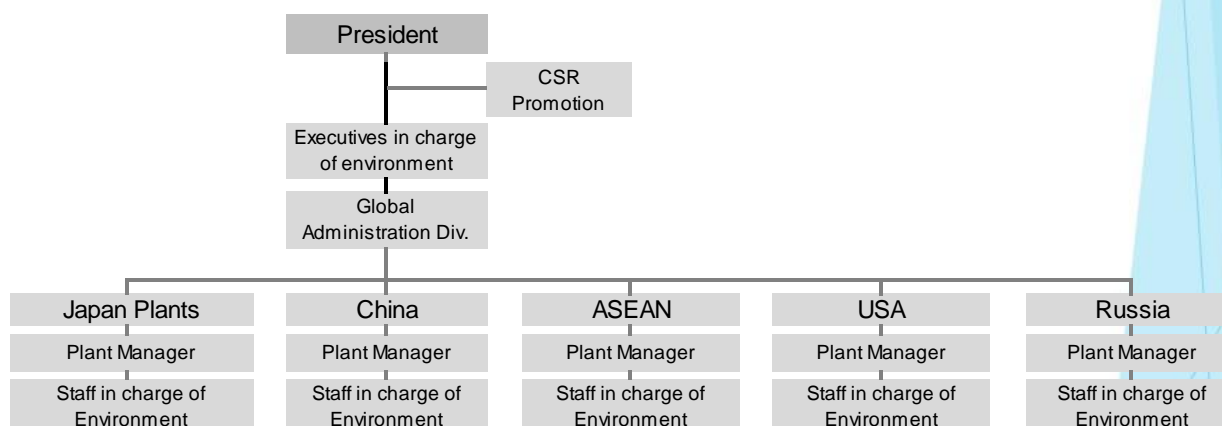
Company Name	Location	Acquired in:
Moka Plants (Kinugawa Anti-vibration product Co.,Ltd. Kinugawa Brake Product Co.,Ltd.)	Moka-City, Tochigi	2002
Kinugawa Koriyama Co.,Ltd.	Koriyama-City, Fukushima	2003
Kinugawa Oita Co.,Ltd.	Nakatsu-City, Oita	2003
Teito Rubber Co.,Ltd.	Iruma-City, Saitama	2003
CPR GOMU IND. P.L.C	Ayutthaya, Thailand	2004
Chung Kw ang Rubber Goods MFG. Co. Ltd.	Taoyuan, Taiwan	2004
Fuzhou Fukw ang Rubber & Plastic Co.,Ltd	Fuzhou Fujian, P. R. China	2004
Sato Rubber Chemical Industry Co.,Ltd.	Narita-City, Chiba	2005
Kinugawa Rubber & Plastic Guangzhou Co., Ltd.	Guangzhou, P. R. China	2007
KINUGAWA (Thailand) CO., LTD	Ayutthaya, Thailand	2008
TEPRO, INC.	Tennessee, USA	2011

New plants are planned to obtain the certification sequentially.

## ● Promoting Organization of Environmental Management

We are promoting activities of obtain of certification for Environmental Manage System and maintenance and update of it, and aiming business activity to reduce environmental impact by grasping volume of CO2 emission, water intake, and industrial waste in plants in global.

### Promoting Organization of Environmental Management



## ■ Middle-term Environmental Target

Regarding volume of CO2 emission, industrial waste, and VOC (Volatile Organic Compound ), our company join activity plan for environment of Japan Rubber Manufacturers Association, in Japan Business Federation, and do our best to reduce environmental impact.

	Activity Detail		Target in 2014	Achievement in 2014	Evaluation	Reference
1	Countermeasures against Global Warming	CO2 Emission reduction by base unit ※1	Base Year: 2005 Reduction 15% by 2020	17% reduction	○	P10
2	Reduction of Industrial Waste	Reduction of final disposal volume (Direct) ※2	Base Year: 2001 Reduction over 90%	100% reduction	○	P11
		Reduction of final disposal volume (Direct & Indirect) ※3	Under 1%	0.7%	○	P11
3	Reduction of VOC Emission Volume	Emission volume reduction of designated 17 substances ※4	Base Year: 2000 Reduction over 50%	34% reduction	× ※5	P12

※1) CO2 emission basic unit: CO2 emission volume/usage volume of rubber & resin material

※2) Waste Volume (Direct): waste volume that our company dispose by landfill

※3) Waste Volume (Direct Indirect): waste volume that processor dispose by landfill/Total waste volume

※4) VOC emission volume: total volume of designated 17 substances that our materials contain

※5) Target for VOC emission volume is in-achieved, but we are promoting reduction gradually. Coating material of Solvent type that contain VOC is changing into material of water base type, and machine introduction plan is now promoted in overseas plants. Emission volume in 2015 is expected around 42%



## 1. Global Warming Countermeasure

### Reduction of CO2 Emission Basic Unit

#### ● “Fun to Share” activity (Japan)

Our company declared the policy “Low carbon society by developing of eco-friendly products and effective manufacturing”, and joined “Fun to Share” activity.

\*\*“Fun to Share” is password that addresses to make low carbon society, sharing new knowledge happily together. It is idea to make low carbon society in every happy day, not making with patience to achieve target.

Typical activities are “CoolBiz” and “WarmBiz”.



#### ● Manufacturing Activity

Much energy is used for heating and processing of material in manufacturing activity, and electricity, gas, and heavy oil is consumed as energy source.

CO2 is generated when purchased energy is produced and used. Our company staffs all work as one to reduce emission of CO2 through energy saving activity.

We've joined environmental activity by Japan Rubber Manufacturers Association, along the “Commitment to a Low Carbon Society” by Japan Business Federation, and we set 15% reduction of CO2 emission base unit by 2020 (basic year: 2005) as a target.

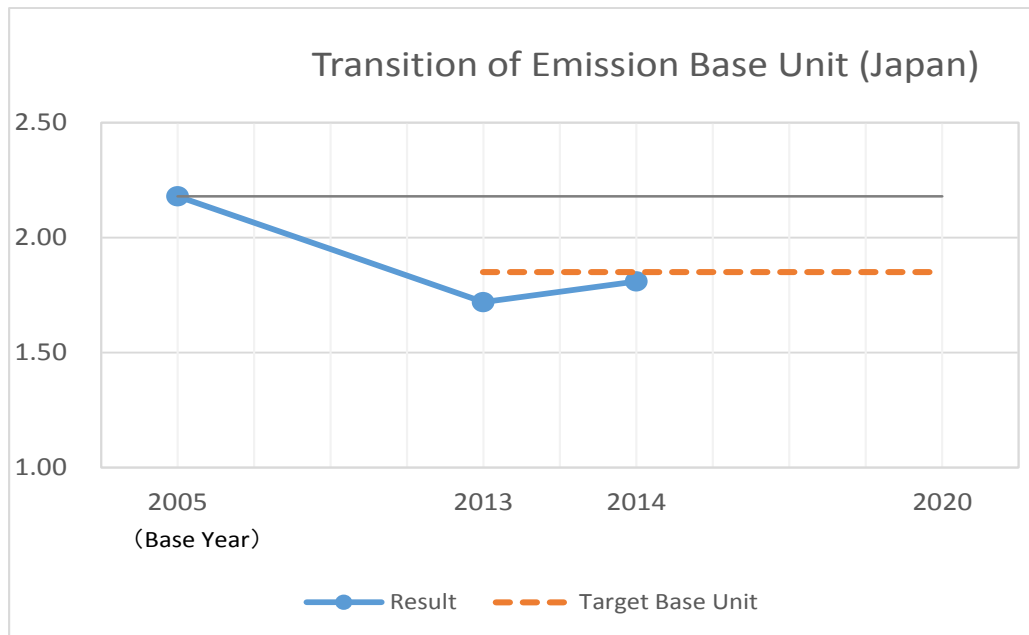
(CO2 emission base unit: CO2 emission volume/Usage volume of rubber & resin material)

CO2 base unit is benchmark that can recognize energy effectiveness, and our company has achieved target since 2010, and we promise to keep improvement of energy effectiveness additionally.

Concrete improvement items are as followings:

#### ● Concrete improvement measure

- Update to energy saving motor from current machine motors (IE1→IE3)
- Introduction of Hydraulic unit with energy saving spec. to new machine
- Change into appropriate volume of power source
- Update fluorescent light into LED light



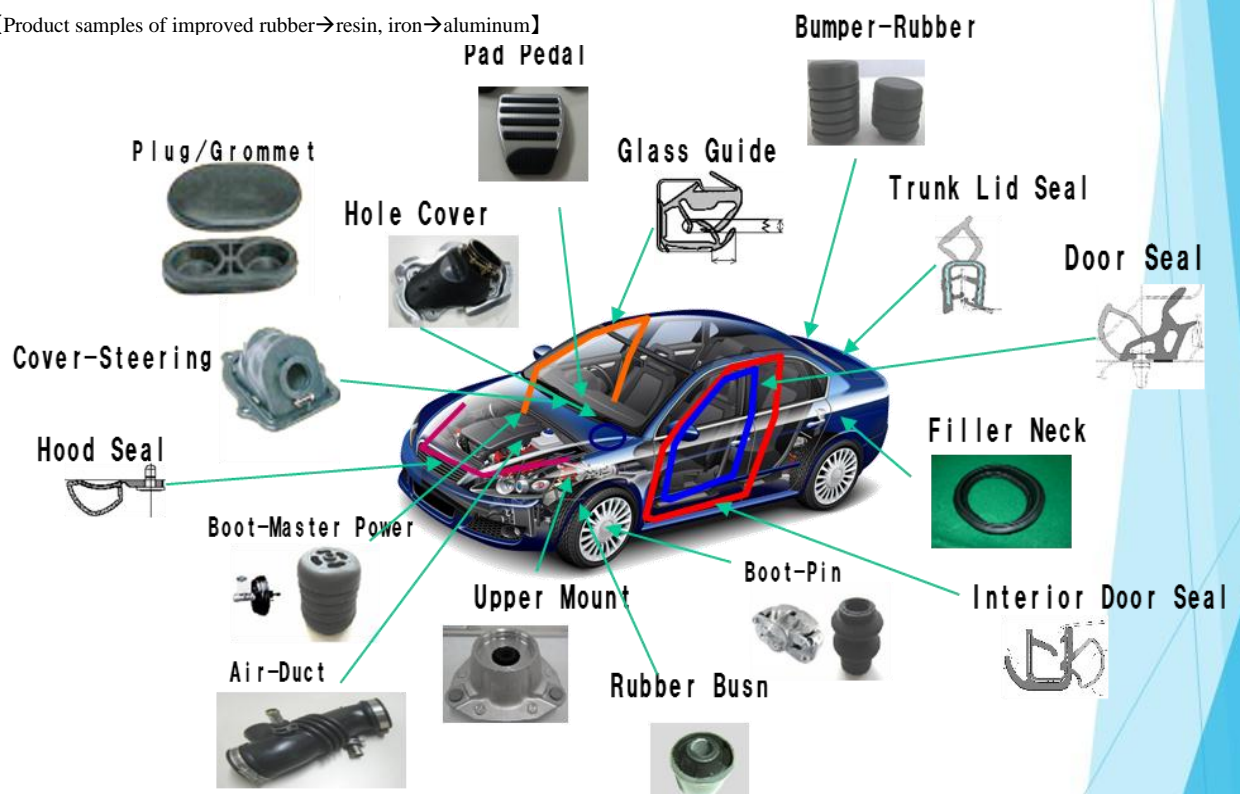
#### ●Product Design (Improvement of Product)

We achieved 30% of drastic weight saving from 2005 to 2014 by reducing profile size and resinification of Glass-guide products (Body Sealing Products), and by changing iron core metal to aluminum for Anti-vibration products. (Usage volume/unit \*compared to our company's products, Please refer graph 1)

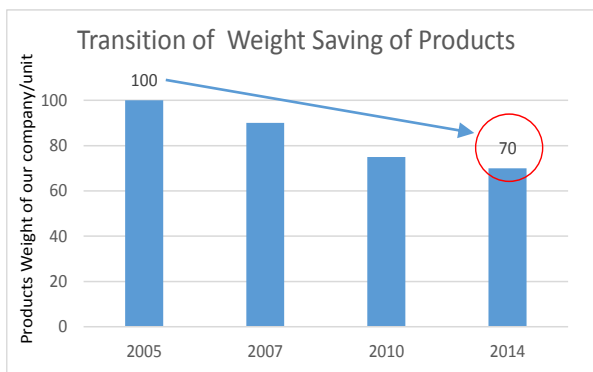
We also achieved 63% of energy reduction for manufacturing by improvement of manufacturing method for resinification of Body Sealing Products. (Electricity for manufacturing of Glass-guide, \* compared to our company's products, Please refer graph 2)

We are reducing energy for manufacturing of many Chassis precision products by resinification and weight saving.

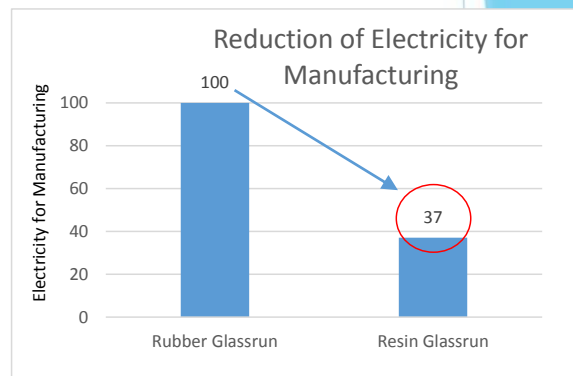
【Product samples of improved rubber→resin, iron→aluminum】



(Graph1) Yearly product weight, setting weight in 2005 at 100



(Graph2) Energy volume for manufacturing of GRUN by rubber and resin, setting energy by rubber



## 2. Reduction of Industry Waste (Main Plants in Japan)

### Reduction of final disposal volume and Lowering of final disposal rate

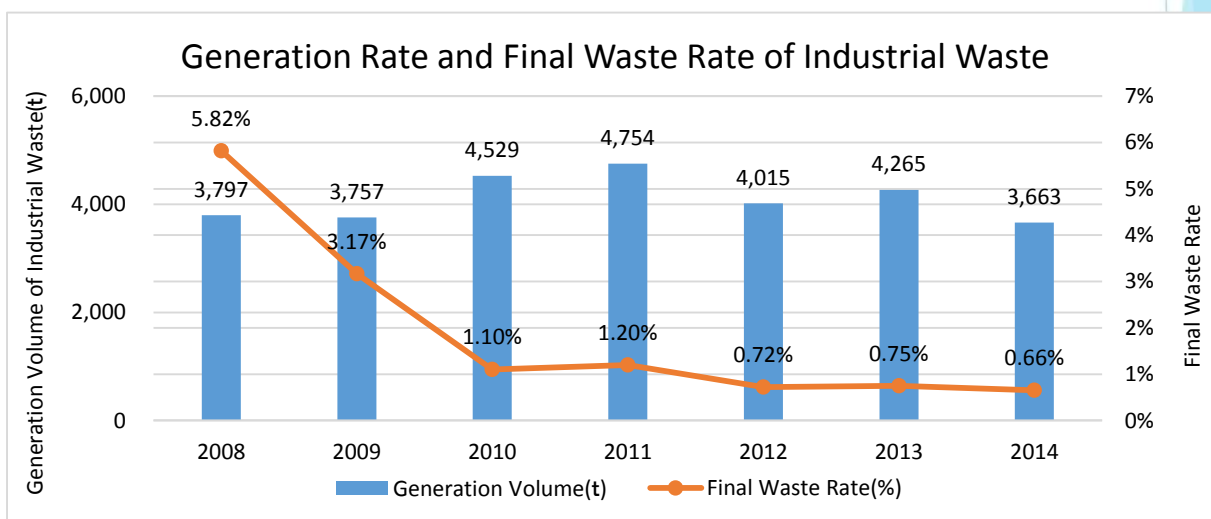
Industrial waste volume in main plants in Japan is fluctuating according to production volume.

We have kept less than 1% of final disposal rate (land disposal rate) since 2012, and have achieved zero emission※1.

We keep 3R (Recycle, Reduce, Reuse) continuously, and aim 0% of land disposal rate (absolute zero emission ※2).

※1) Zero Emission : Final disposal rate is less than 1 %.

※2) Absolute Zero Emission : Final disposal rate is 0%



#### ● Concrete Activities

- Simplification of recycle by resinification of Boy Sealing products and Chassis precision products (Refer P10 chart).
- Crush machines are introduced in overseas plants to support in-process recycle easily.

### ●PCB Control of Waste

We control waste of transformer, condenser and Fluorescent lamp ballast that contain high concentration PCB, complying with regulations.

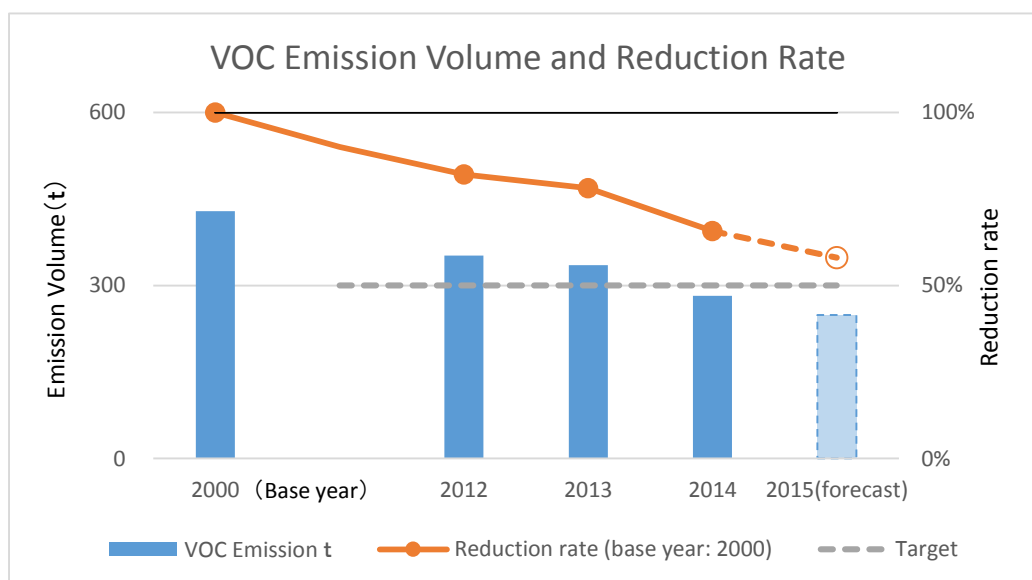
5 unit of machines were on PCB detoxication treatment at Japan Environmental Safety Corporation (current : Japan Environmental Storage & Safety Corporation)in 2010.

### 3 Reduction of VOC (Volatile Organic Compound) Emission Volume (Main Plants in Japan)

Reduction of emission volume of designated 17 substances

We are working for reduction of VOC (Volatile Organic Compound) that causes photochemical smog by photochemical reaction in the atmosphere.

We addressed usage reduction of organic solvent such as xylene or Methyl chlorides after 2012, and could achieve reduction of the emission. We are reducing the emission in 2014 compared with previous year, and around 42% of reduction is expected in 2015. We promise to work on reduction of usage and emission volume as followings continuously.



### ● Concrete Activities

- Switch from organic solvent into water base coating material and water base bond

Water base coating is now under deployment to overseas plants, and we keep continuous production activity that is eco-friendly to environment.

- Removal of appearance coating material

We introduce appearance coating method without using solvent for Body Sealing products.

- Switch into cleaning liquid that does not contain VOC substances (From Methyl chlorides to bromine-containing solvent)
- Promotion of coating efficiency



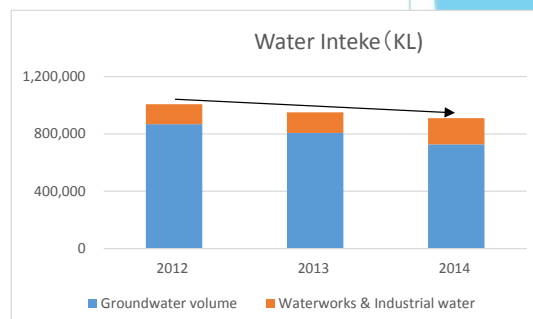
## ■ Global Environment Data

Our plants in global control the environment data and keep working for reduction of environmental impact.

### ● Water Resource Input Volume

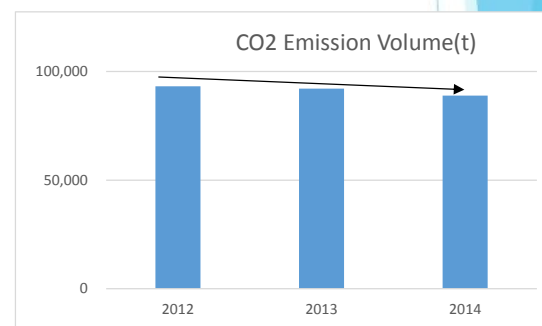
#### Reduction of input volume of groundwater and other water resource

Input Volume in Kinugawa Rubber group companies is tend to lowering. Input volume of groundwater is especially lowering by reviewing of temperature of circulating water. We aim effective utilization of water resource by reduction of displacement with updating circulation water system.



### ● CO2 Emission Volume

CO2 emission volume in Kinugawa Rubber group companies is tend to lowering. Overseas plants are working for restrict of energy consumption and reduction of CO2 emission volume by effective manufacturing and machine improvement.



### ● Industrial Waste Volume

Industrial waste volume in Kinugawa Rubber group companies is tend to lowering. Resinification of products is introduced in global, and it contributes to reduction of industrial waste volume by prompting recycle rate.

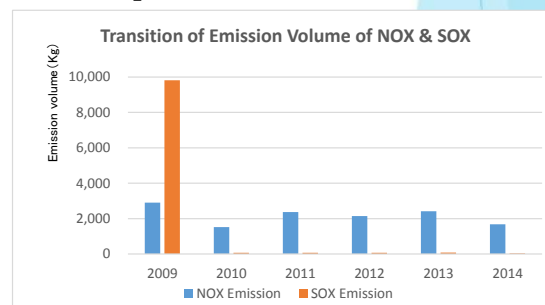


## ■ Other Environmental Data

### ● Prevention of Discharge of Air Pollutant (Main Plants in Japan)

#### Emission reduction of NOx, SOx

Emission volume of Sox (sulphur oxide) and NOx (nitrogen oxide) is reduced because of fuel conversion (from A heavy oil to town gas) in 2010, aiming CO2 reduction of greenhouse gas.



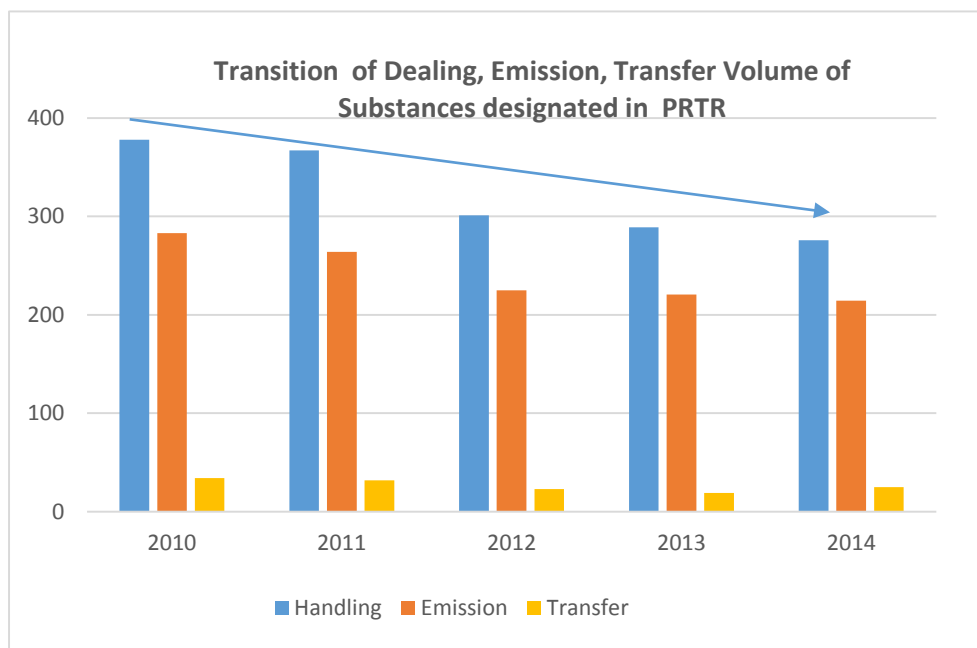
## ● PRTR※1(Main Plants in Japan)

### PRTR※1(Main Plants in Japan)

※1) PRTR:Pollutant Release and Transfer Register(Regulations about grasp of emission volume of designated chemical material to environment and promotion of improvement to control)

Target substance: Class I designated chemical substance and Class I specified chemical substance

We treat 16 substances, 276t on 2014, and it is reduced 13t compared with the previous year. We keep working on lowering of volume of treatment, emission, and transfer by continuous activity such as reviewing current material.



Status of Transfer and Emission of Environmental Impact Substances in 2014(April 2014 to March 2015)  
(Detail of designated 16 substances treated in Kinugawa Rubber) <unit ton/year>

Cabinet Order	CAS No.	Designated Chemical Substance	Transfer	Emission		
			Waste	Atmosphere	Water quality	Soil
300	108-88-3	Toluen	12.0	150.0	0.0	0.0
230	793-24-8	6PPD	2.0	0.1	0.0	0.0
262	127-18-4	tetrachloroethylene	3.0	21.0	0.0	0.0
80	1330-20-7	Xylene	1.1	20.0	0.0	0.0
53	100-41-4	Ethyl benzene	0.9	17.0	0.0	0.0
15	80-51-3	OBSH	0.1	0.0	0.0	0.0
452	149-30-4	MBT	1.0	0.0	0.0	0.0
330	80-43-3	Bis(1-methyl-1-phenylethyl)peroxide	1.0	0.0	0.0	0.0
268	137-26-8	Thiuram	1.0	0.0	0.0	0.0
296	95-63-6	1,2,4-Trimethylbenzene	1.0	4.0	0.0	0.0
384	106-94-5	1-bromopropane	0.0	0.0	0.0	0.0
186	75-09-2	Dichloromethane/Methyl chlorides	0.1	2.4	0.0	0.0
42	96-45-7	ETU	1.0	0.0	0.0	0.0
232	68-12-2	DMF	0.2	0.0	0.0	0.0
454	95-32-9	2-(Morpholinothio)benzothiazole	0.1	0.0	0.0	0.0
205	102-06-7	DPG	1.0	0.0	0.0	0.0
Total			26	214	0	0

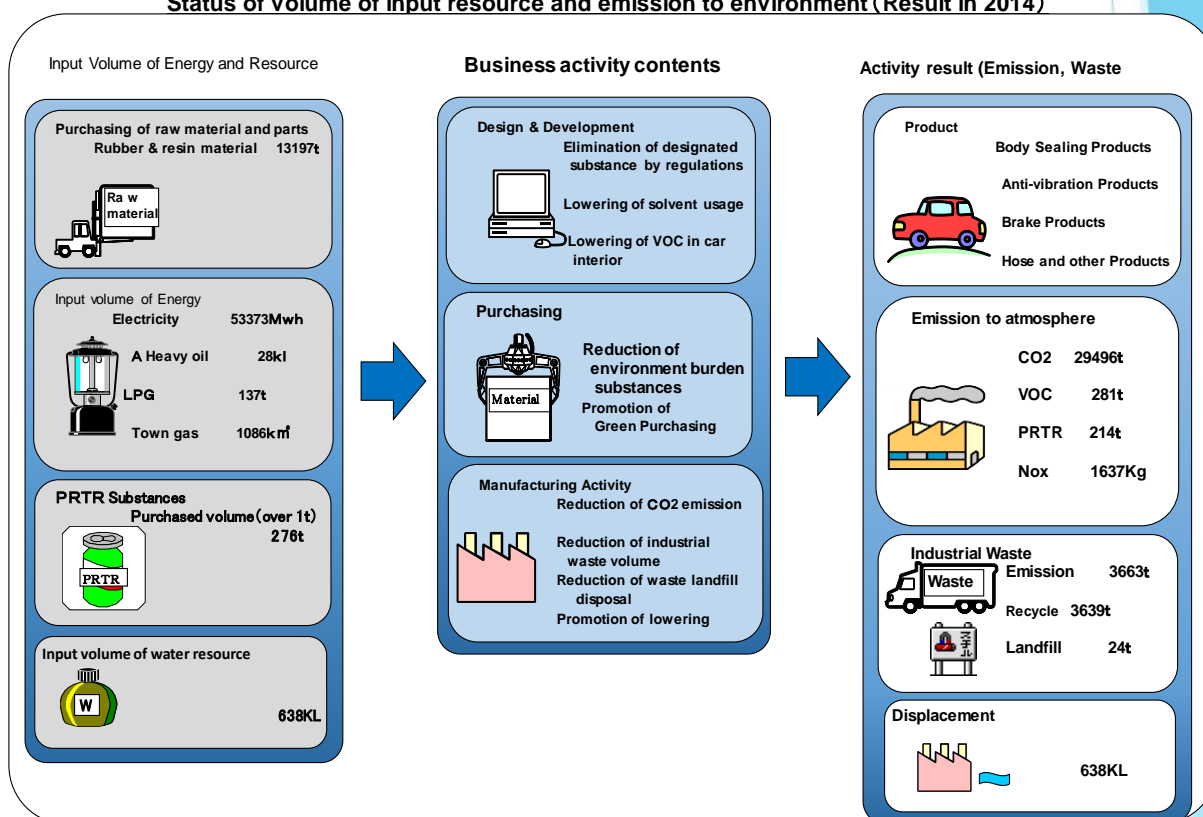
## ■ Material Balance (Main Plants in Japan)

Total volume of substance input, emission, and waste in main plants in Japan is provided below.

Regarding rubber and resin material, our main raw material for product manufacturing, resin rate is high because of weight-saving of products and energy reduction for manufacturing. As it is easy to recycle in-process, effect of waste reduction is also high.

We all keep working on reducing volume of input, emission, and waste.

### Status of volume of input resource and emission to environment (Result in 2014)



## ■ Cooperation with Community and Contribution to Society

Each Kinugawa rubber group company holds various activities for development of local community.

### Environmental activity in local Community



Kinugawa Oita Co.,Ltd. holds yearly mowing around path beside Inumaru river and improve environment around plant



Kinugawa Koriyama Co.,Ltd holds regularly cleaning activity around plant.



Headquarters in Chiba holds regularly mowing and cleaning up the dust around building.

### Communication with local community



Yashima rubber (Fukushima) holds activity for environment improvement such as elimination of gravel from road, repair of bank, and cleaning of U-shaped gutter.



Kinugawa Koriyama Co.,Ltd Moka Office, and Kinugawa Oita Co.,Ltd accept plant tour by local elementary school students



Teito rubber (Kyushu plant) accepts work-study in plant by local junior high school students every year.



Kinugawa Oita Co.,Ltd. accepts extracurricular activity by local elementary school students.



Kinugawa Rubber & Plastic Guangzhou Co., Ltd. accepts work-study in plant by local high school students.



Kinugawa Rubber & Plastic Guangzhou Co., Ltd. joins clood contribution activity. All staffs join the activity voluntarilv.



KINUGAWA RUBBER INDUSTRIAL CO.,LTD.

Issued by: Kinugawa Rubber Industrial Co.,Ltd.

330 Naganuma-cho, Inage-Ku, Chiba-City, Chiba Japan

Zip: 262-0005

Contact to: Global Administration Div., Kinugawa  
Rubber Industrial Co.,Ltd.

PHONE : 81-43-259-3370 FAX : 81-43-259-3108

Issued on: December 15<sup>th</sup>, 2015