

# CSR Report of Shinshiro Plant

Main products : Tires for passenger cars and light-duty trucks

Total site area : 322,000 m<sup>2</sup>

Number of employees : 943 (as of June 2009)

Location : 1 Furuyashiki, Noda, Shinshiro-shi, Aichi

441-1341, Japan

Tel: +81-536-22-2251



## Message from the General Manager



Mitsuo Sakurai

The Shinshiro Plant comprises the Main Plant and the South Plant across the Toyo River, and produces primarily high-performance radial tires for passenger cars. As a core production site committed to asserting world-class strengths in technologies for protecting the environment, we are striving to bring environmentally sound products to market, and to eliminate wasteful uses of resources and conserve energy in all phases of tire production. To this end, we introduced a cogeneration system (CGS) and received the 7th president's award of the Japan

Cogeneration Center in March 2008. As part of Yokohama Rubber's "YOKOHAMA Forever Forest" project, a first-phase tree-planting ceremony – planting about 12,000 seedlings prepared by employees – was staged in May 2009, with residents of local communities and local administration invited. In FY2009, according to Phase II of the medium-term management plan "GD100," we are concentrating our efforts to further save energy and reduce industrial waste. We are also striving to again achieve complete zero emissions and 100% recycling rates. In an effort to preserve the rushing waters of the Toyo River and to thrive together with local communities, we actively participate in clean-up activities and local events. Using technology and know-how on cultivating seedlings learned through "YOKOHAMA Forever Forest" activities, our employees prepare additional seedlings and provide them to surrounding areas and other companies, a social contribution most suitable for Shinshiro City, which has won first prize in population category III for three consecutive years in Japan's "Top Eco-City" contest.

## Environmental Policy in FY2009

**As a core plant for Yokohama Rubber in asserting "world-class technologies for protecting the environment," the Shinshiro Plant is determined to be a leader.**

- (1) As part of our social responsibility, we enrich people's lives and contribute to their greater happiness and well-being by devoting our wholehearted and continually making improvements so as to contribute to the environment and prevent environmental risk.
- (2) In order to realize sustainable environmental management, all business units and associated companies making up the Shinshiro Plant establish their own procedures according to their environmental management plans, and maintain and improve them.
- (3) We observe applicable laws and regulations, and agreements, and carry out environmental preservation activities accordingly.
- (4) To protect limited global resources, including energy, raw materials and water, we act to prevent the wasting of them as a part of waste-reduction (MD) activities, and promote the 3Rs (Reduce, reuse, recycle).
- (5) In order to embody this policy, being aware that the original activities of the plant indeed had environmental consequences, we have defined an environmental purpose, set environmental targets, which will be regularly reviewed, formulated an environmental plan, and are implementing it.
- (6) We educate and enlighten all employees and individuals at the Shinshiro Plant so that they fully understand the policy, and to improve their own awareness and actions.
- (7) We strive to contribute to the prosperity of, and live together with, the local community, in harmony and in fusion with nature – the abundant greenery amid the rushing waters of the Toyo River.
- (8) This commitment has been declared to the public.

## Major Interactional Activities with the Local Community

### Participation in Clean-up Activities in the City

In FY2008, in the clean-up campaign known as the "Shinshiro Clean Festa," sponsored by the city in June and October, 247 employees took part. We also cleaned roads around the plant eight times in FY2008 with participation by a total of 211 employees, collecting 57 kilograms of trash and litter.

### Traffic Safety Guidance

Participating also in a national traffic safety campaign, 504 employees worked together with local citizens on traffic safety guidance in front of the main gate of the plant.

### Plant Tour and Opinion Meetings with Neighboring Resident Association Chairpersons

In June 2008, the plant invited 18 ward heads and others from around the plant for a plant tour and informal talks.

### Sponsorship of Local Events

We co-sponsored local events, including the "Shinshiro Summer Fireworks Festival" in August 2008, the "Shinshiro Rally" in November and the "Shinshiro Marathon" in January 2009. In the "New Year's Parade of Firefighters in Shinshiro," the plant's fire brigades took part.



Taking part in "Shinshiro Clean Festa"



Guiding primary students to school safely



With participants in plant tour and gathering

## Commendation for Environmental and Social Contribution Activities

### President's award from the Japan Cogeneration Center

In March 2009, we received the president's award from the Japan Cogeneration Center as the best example of introducing cogeneration systems (CGS).



Commemorating the cogeneration prize

**Exercises Dealing with Spillages of Oil**

In June 2008, an exercise was conducted assuming an oil spill into the Toyo River, and 54 employees took part.

**Joint Emergency Drill with Shinshiro Fire Department**

With the participation of 850 employees, an emergency drill was undertaken jointly with the Shinshiro Fire Department.



Drill responding to oil spillage into the river



Employees spraying water



The "YOKOHAMA Forever Forest" project is creating forests by planting a total of 500,000 trees at production sites in Japan and around the world in anticipation of the company's 100th anniversary in 2017. Started with a tree-planting ceremony at the Hiratsuka Factory in November 2007, the project is now fully underway.

- May 2009: First-Phase Tree-Planting Ceremony (1,000 participants; 12,000 trees planted)
- 2010 (planned): Second-Phase Tree Planting Ceremony



**Environmental Data**

**PRTR substances**

(Unit: tons/year)

**Shinshiro Plant**

Safety Evaluation: VII-2

Designated No.	Specified chemical substance	Amount to treat <sup>1</sup>	Emission <sup>2</sup>	Transfer <sup>3</sup>	Toxicity Rank (effect on people)	Annual Converted Emissions (effect on people)	Toxicity Rank (effect on ecosystem)	Annual Converted Emissions (effect on ecosystem)
115	N-cyclohexyl-2-benzothiazolesulfenamide	570	0	4.1	D	0	A	0
282	N-(tert-butyl)-2-benzothiazolesulfenamide	200	0	0.69	D	0	A	0
198	Hexamethylenetetramine	49	0	0.26	C	0	D	0
100	Cobalt and its compounds	20	0	0.43	A	0	-	0
310	Formaldehyde	16	0	0	A	0	C	0
63	Xylene	1	1	0	C	10	A	1000
<b>Total</b>		<b>856</b>	<b>1</b>	<b>5.48</b>		<b>10</b>		<b>1000</b>

\*1: Amounts of 1 ton or more are listed. As for substances designated as Class 1 Specified Chemicals such as benzene, amounts of 0.5 tons or more are listed.  
 \*2: Emission = Air + public water + soil  
 \*3: Transfer = Waste + public sewage

(Unit: tons/year)

**Shinshiro Minami Plant**

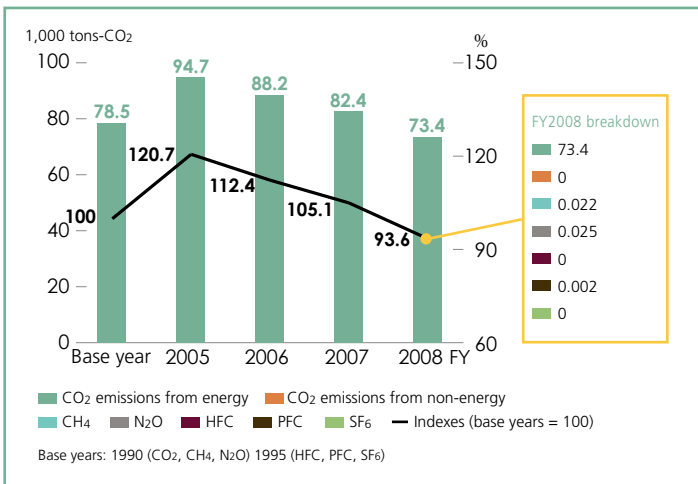
Safety Evaluation: VIII-5

Designated No.	Specified chemical substance	Amount to treat <sup>1</sup>	Emission <sup>2</sup>	Transfer <sup>3</sup>	Toxicity Rank (effect on people)	Annual Converted Emissions (effect on people)	Toxicity Rank (effect on ecosystem)	Annual Converted Emissions (effect on ecosystem)
115	N-cyclohexyl-2-benzothiazolesulfenamide	64	0	0.74	D	0	D	0
282	N-(tert-butyl)-2-benzothiazolesulfenamide	20	0	0.3	A	0	A	0
198	Hexamethylenetetramine	3.1	0	0.057	C	0	D	0
100	Cobalt and its compounds	11	0	0.044	A	0	D	0
<b>Total</b>		<b>98.1</b>	<b>0</b>	<b>1.14</b>		<b>0</b>		<b>0</b>

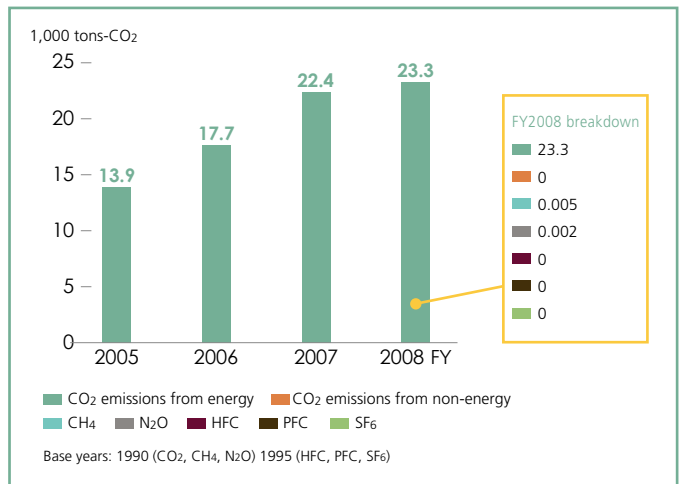
\*1: Amounts of 1 ton or more are listed. As for substances designated as Class 1 Specified Chemicals such as benzene, amounts of 0.5 tons or more are listed.  
 \*2: Emission = Air + public water + soil  
 \*3: Transfer = Waste + public sewage

**Combined greenhouse gas emissions and their indices (base years = 100)**

Shinshiro Plant (data released by each plant as required by law)



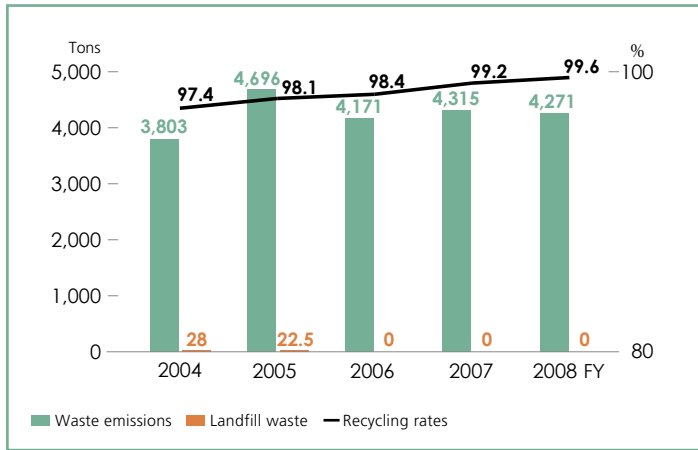
Shinshiro Minami Plant (data released by each plant as required by law)



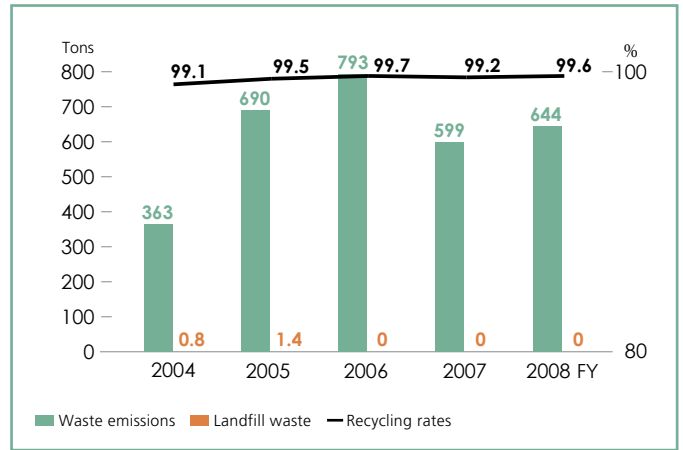
\*The plant was built in FY2005

Waste emissions, landfill disposal and recycling rates

Shinshiro Plant



Shinshiro Minami Plant



Air-quality-related data (major facilities)

Shinshiro Plant

Facility	Substance	Regulation	Self-imposed control value	FY2008 result		
				Average	Maximum	Minimum
Shinshiro Plant Boiler 1	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	0	0	Less than 0.02	Less than 0.01
	Nitrogen oxide density (ppm)	150	100	64.5	65	64
	Soot and dusts density (g/m³N)	0.1	0.1	0	Less than 0.001	Less than 0.001
Shinshiro Plant Boiler 2	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	0	0	Less than 0.02	Less than 0.01
	Nitrogen oxide density (ppm)	150	100	61	64	58
	Soot and dusts density (g/m³N)	0.1	0.1	0	Less than 0.001	Less than 0.001
Shinshiro Plant Cogeneration (introduced in January 2007)	Sulfur oxide emissions (m³N/h)	—	0	Less than 0.3	Less than 0.3	Less than 0.2
	Nitrogen oxide density (ppm)	100	80	60.8	91	39
	Soot and dusts density (g/m³N)	0.05	0.05	Less than 0.003	Less than 0.004	Less than 0.002
Shinshiro Plant Warm-water Boiler A	Nitrogen oxide density (ppm)	150	50	31	37	25
	Soot and dusts density (g/m³N)	0.1	0	Less than 0.003	Less than 0.003	Less than 0.002
Shinshiro Plant Warm-water Boiler B	Nitrogen oxide density (ppm)	150	50	29.5	36	23
	Soot and dusts density (g/m³N)	0.1	0	Less than 0.003	Less than 0.003	Less than 0.003
Shinshiro Plant Dipping machine	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	0.0034	Less than 0.003	Less than 0.003	Less than 0.003
	Nitrogen oxide density (ppm)	250	150	12.7	22	Less than 10
	Soot and dusts density (g/m³N)	0.15	0.1	0.01	0.024	0.002

\*Regulations in Article 3: Under the provisions of Article 3, enforcement regulations for the Air Pollution Prevention Law (regulatory values are subject to change)  
 \*The Shinshiro Plant complies with the Air Pollution Prevention Law, and Aichi Prefectural regulations (the dipping machine also conforms to the Environmental Pollution Prevention Agreement with Shinshiro City). Again no violations of regulations in FY2008.  
 \*If values are beyond self-imposed control values, causes thereof are promptly identified and actions are taken to return them to the normal range.

Shinshiro Minami Plant

Facility	Substance	Regulation	Self-imposed control value	FY2008 result		
				Average	Maximum	Minimum
Shinshiro Minami Plant High-pressure Boiler 1	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.02	0.02	0.02
	Nitrogen oxide density (ppm)	180	150	81.5	93	70
	Soot and dusts density (g/m³N)	0.25	0.1	0.003	0.004	0.001
Shinshiro Minami Plant High-pressure Boiler 2	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.02	0.02	0.02
	Nitrogen oxide density (ppm)	180	150	93	110	76
	Soot and dusts density (g/m³N)	0.25	0.1	0.002	0.004	Less than 0.001
Shinshiro Minami Plant High-pressure Boiler 3	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.05	0.05	0.05
	Nitrogen oxide density (ppm)	180	150	82	89	75
	Soot and dusts density (g/m³N)	0.25	0.1	0	Less than 0.001	Less than 0.001
Shinshiro Minami Plant High-pressure Boiler 4	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.045	0.05	0.04
	Nitrogen oxide density (ppm)	180	150	88	94	82
	Soot and dusts density (g/m³N)	0.25	0.1	0.001	0.002	Less than 0.001
Shinshiro Minami Plant High-pressure Boiler 5	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.045	0.05	0.04
	Nitrogen oxide density (ppm)	180	150	82.5	90	75
	Soot and dusts density (g/m³N)	0.25	0.1	0.001	0.001	Less than 0.001
Shinshiro Minami Plant High-pressure Boiler 6	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.07	0.09	0.05
	Nitrogen oxide density (ppm)	180	150	91	98	84
	Soot and dusts density (g/m³N)	0.25	0.1	0	Less than 0.001	Less than 0.001
Shinshiro Minami Plant Low-pressure Boiler 1	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.02	0.02	0.01
	Nitrogen oxide density (ppm)	180	150	79	80	78
	Soot and dusts density (g/m³N)	0.25	0.1	0.005	0.007	0.003
Shinshiro Minami Plant Low-pressure Boiler 2	Sulfur oxide emissions (m³N/h)	Regulations in Article 3	1.0	0.015	0.02	0.01
	Nitrogen oxide density (ppm)	180	150	74.5	83	66
	Soot and dusts density (g/m³N)	0.25	0.1	0.005	0.005	0.005

\*Regulations in Article 3: Under the provisions of Article 3, enforcement regulations for the Air Pollution Prevention Law (regulatory values are subject to change)  
 \*The Shinshiro Minami Plant complies with the Air Pollution Prevention Law and the Environmental Pollution Prevention Agreement with Shinshiro City. Again no violations of regulations in FY2008.

Water-quality-related data (major facilities)

Shinshiro Plant

Drain	Substance	Regulation	Self-imposed control value	FY2008 result		
				Average	Maximum	Minimum
Shinshiro Plant Drain 1	PH	5.8~8.6	6.5~8.0	7.5	7.7	7.2
	BOD density (mg/l)	20	up to 14.0	2.2	4.2	0.7
	COD density (mg/l)	20	up to 14.0	2.8	4.1	1.7
	SS density (mg/l)	20	up to 14.0	1.9	11.0	Less than 1.0
Shinshiro Plant Drain 2	PH	5.8~8.6	6.5~8.0	7.6	7.8	7.0
	BOD density (mg/l)	20	up to 14.0	2.0	4.4	0.5
	COD density (mg/l)	20	up to 14.0	2.9	9.8	1.7
	SS density (mg/l)	20	up to 14.0	1.7	11.0	Less than 1.0
Shinshiro Plant Drain 2	Oil density (mg/l)	10	up to 5.0	Less than 0.5	0.5	Less than 0.5

\*According to Aichi Prefectural regulations and the Environmental Pollution Prevention Agreement with Shinshiro City. Again no violations of regulations in FY2008.

Shinshiro Minami Plant

Drain	Substance	Regulation	Self-imposed control value	FY2008 result		
				Average	Maximum	Minimum
Shinshiro Minami Plant Drain 1	PH	5.8~8.6	6.5~8.0	7.6	7.8	7.4
	BOD density (mg/l)	20	up to 14.0	7.0	10.0	3.7
	COD density (mg/l)	20	up to 14.0	6.0	7.3	4.3
	SS density (mg/l)	20	up to 14.0	1.9	4.0	1.0
Shinshiro Minami Plant Drain 2	PH	5.8~8.6	6.5~8.0	7.6	7.9	7.3
	BOD density (mg/l)	20	up to 14.0	5.8	12.0	2.8
	COD density (mg/l)	20	up to 14.0	5.3	6.4	3.7
	SS density (mg/l)	20	up to 14.0	3.1	5.0	1.0
Shinshiro Minami Plant Drain 2	Oil density (mg/l)	10	up to 5.0	Less than 0.5	0.5	Less than 0.5

\*According to Aichi Prefectural regulations and the Environmental Pollution Prevention Agreement with Shinshiro City. Again no violations of regulations in FY2008.