Plant Discharge Data

■Air Pollution Data:
※The following units are used: P.M., g/Nm^3; NOx, ppm; SOx, K value; hydrogen chloride, mg/Nm^3
※The most stringent value prescribed by laws, ordinances, or conventions is rendered as the specified value.
※The measurement indicates the maximum value.
※ If a multiple number of the same type of equipment is used, the equipment given is the one to which the most stringent specified value is applied.

Kariya Region

(Kariya Plant•Trial Manufacturing Plant•R&D center)

- Location／2-1 Asahi-machi, Kariya, Aichi 448-8650, Japan
- Completion／March. 1943
- Land Area／182,000㎡
- Floor Space／164,000㎡
- Employees／3,850
- Main Products／Disc brakes, brake master cylinders, parking brakes, wheel cylinders, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	180	150	120
P.M.	Boiler	0.2	0.2	0.002
	Gas carburizing furnace	0.2	0.2	Abolition
SOx	Boiler	1.75	1.75	0.17
	Gas carburizing furnace	3.5	1.75	——

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Zinc compounds (water-soluble)	1,320	0	66	0	132	198	924	0
Organic tin compounds	268	0	3	24	0	0	241	0
Toluene	216	216	0	0	0	0	0	0
Lead and its compounds	781	5	0	6	38	0	727	3
Nickel compounds	607	0	0	0	0	425	182	0
Bis (2-ethylhexyl) phthalate	7,153	1	0	230	332	3	6,588	0
Poly(oxyethylene) nonylphenyl ether	515	2	25	475	0	0	9	4
Manganese and its compounds	584	0	0	0	29	175	380	0
Total	11,444	225	93	735	531	801	9,051	7

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	5.8～8.6	5.8～8.6	7.2	6.6
BOD	25	20	5	2.3
COD	25	20	10	4.4
SS	30	20	12	3
Oil	5	3	0.3	0.1
Total nitrogen	15	15	6.4	4
Total phosphorus	2	2	0.1	0.1
Coliform bacteria	3,000	1,000	0	0
Soluble iron	5	2	0.7	0.7
Soluble manganese	5	2	ND	——
Zinc	5	2	0.13	0.07
Copper	1	0.5	0.36	——
Chromium	2	0.4	ND	ND
Phenols	5	1	ND	——
Fluorine	8	2	ND	——
Cadmium	ND	ND	ND	——
Cyanide	ND	ND	ND	——
Lead	0.08	ND	ND	——
Chromium(VI)	0.05	ND	ND	——

Handa Region

(Handa Plant•Handa Electronic Plant)

- Location／4-29 Nitto-cho, Handa, Aichi 475-0033, Japan
- Completion／April.1991
- Land Area／325,000㎡
- Floor Space／80,000㎡
- Employees／1,080
- Main Products／Electronic control units, sensors, actuators, antilock brake systems, power tilt & telescopically adjustable steering columns, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	150	150	57
	Generator	200	200	180
P.M.	Boiler	0.10	0.10	0.002
	Generator	0.05	0.05	0.004
SOx	Boiler	1.75	1.75	0.008
	Generator	1.75	1.75	0.04

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Bis(2-ehtylhexyl) adipate	402	0	0	0	0	0	402	0
2-Aminoethanol	903	0	0	375	8	378	0	143
Bisphenol A type epoxy resin (liqid)	7,121	0	0	0	0	0	7,121	0
Toluene	3,890	3,068	0	0	822	0	0	0
Lead and its compounds	7,951	0	0	0	398	0	7,553	0
Molybdenum and its compounds	175	0	0	0	0	0	175	0
Tris(dimethylphenyl) phosphata	258	0	0	0	0	0	258	0
Xylene	3,401	3,401	0	0	0	0	0	0
Total	24,100	6,469	0	375	1,227	378	15,508	143

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	6.0~8.0	6.0~8.0	6	7.4
BOD	15	10	5.0	1
COD	15	10	9.2	2.9
SS	15	10	1.6	0.5
Oil	2	2	0.4	0.1
Total nitrogen	15	15	15	6.4
Total phosphorus	2	2	ND	ND
Coliform bacteria	3,000	1,000	15	1.3
Soluble iron	0.5	0.5	0.38	0.04
Soluble manganese	0.5	0.5	0.13	0.1
Zinc	5	2	0.25	0.16
Copper	1	0.5	ND	——
Chromium	2	0.4	ND	ND
Phenols	0.5	0.5	ND	——
Fluorine	8	2	ND	——
Cadmium	0.1	ND	ND	——
Cyanide	ND	ND	ND	——
Lead	0.1	ND	ND	——
Chromium(VI)	0.05	ND	ND	——

■Water Pollution Data:
※The following units are used: mg/ℓ (except pH); and count/ cm³ for Coliform bacteria only
※pH: hydrogen ion concentration; BOD: biochemical oxygen demand; COD: chemical oxygen demand; SS: suspended solids
※The most stringent value prescribed by laws, ordinances, or conventions is rendered as the specified value.
※"ND" indicates a value that is below the minimum detection limit.

■PRTR-Target Substances
※Unit: kg/ year
※Does not include compounds of which Aisin handles less than 100kg/ year

Anjo Plant

- Location／1-24 Shofukuda, Minowa-cho, Anjo, Aichi 446-8524, Japan
- Completion／November. 1961
- Land Area／36,000㎡
- Floor Space／26,000㎡
- Employees／350
- Main Products／Beds, sewing machines, embroidery machines, shower-toilet seats, gas engine driven heat-pump air conditioners, supplemental drive unit for artificial human hearts, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	——	230	33
P.M.	Boiler	0.3	0.3	0.002
SOx	Boiler	5.3	5.0	0.005

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Antimony and its compounds	21,858	0	0	0	652	0	21,207	0
Ethylene glycol	75,285	0	0	0	0	0	75,285	0
Xylene	152	152	0	0	0	0	0	0
Chlorodifluorromethane (HCFC-22)	58,460	197	0	0	0	237	58,026	0
Total	155,754	349	0	0	652	237	154,517	0

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	6.5~8.5	6.5~8.5	7.8	7.1
BOD	20	10	3.6	1.1
COD	——	10	4.8	3.2
SS	20	10	5.4	1.5
Oil	4	1	0.5	0.2
Total nitrogen	——	10	1.8	1.3
Total phosphorus	——	2	ND	ND
Coliform bacteria	1,000	1,000	0	0
Soluble iron	2	2	ND	ND
Soluble manganese	2	2	ND	——
Zinc	2	2	0.16	0.06
Copper	0.2	0.2	ND	——
Chromium	0.2	0.2	ND	ND
Phenols	0.2	0.2	ND	——
Fluorine	2	2	ND	——
Cadmium	ND	ND	ND	——
Cyanide	ND	ND	ND	——
Lead	0.1	ND	ND	——
Chromium(VI)	0.05	ND	ND	ND

Shinkawa Plant

- Location／4-75 Rokuken-cho, Hekinan, Aichi 447-0861, Japan
- Completion／March. 1945
- Land Area／23,000㎡
- Floor Space／23,000㎡
- Employees／470
- Main Products／Door latches, window regulators, sensors, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	260	180	96
P.M.	Boiler	0.30	0.20	0.002
SOx	Boiler	1.75	1.75	0.088

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Bis(2-ehtylhexyl) adipate	134	0	0	0	0	0	134	0
Toluene	222	222	0	0	0	0	0	0
Lead and its compounds	117	0	0	0	6	0	111	0
Total	473	222	0	0	6	0	245	0

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	5.8~8.6	5.8~8.6	7.5	6.7
BOD	25	20	7.8	1.6
COD	25	20	*33	6.8
SS	30	20	7	1.4
Oil	5	3	0.8	0.2
Total nitrogen	40	40	34	19
Total phosphorus	3	3	0.2	0.1
Coliform bacteria	3,000	1,000	0	0
Soluble iron	5	2	0.21	0.21
Soluble manganese	5	2	0.05	0.05
Zinc	5	2	0.70	0.29
Copper	1	0.5	ND	ND
Chromium	2	0.4	ND	——
Phenols	5	1	ND	——
Fluorine	8	2	ND	——
Cadmium	0.1	ND	ND	——
Cyanide	1	ND	ND	——
Lead	0.1	ND	ND	——
Chromium(VI)	0.5	ND	ND	——

*Cause: Although the rules specify that used detergent from cleaning operations performed by outside clean-up firms is to be taken away for off-site disposal, unauthorized disposal in rainwater drains occurred, resulting in abnormal quality of the water in the discharge tank. Automatic monitoring equipment detected the abnormality and effected a transfer to an emergency tank.
Countermeasure: The firms commissioned to perform cleaning were assembled and given training as part of thorough efforts to prevent recurrence of the problem.

Shintoyo Plant

- Location／1 Tennoh, Takaokashin-machi, Toyota, Aichi 473-0921, Japan
- Completion／August. 1961
- Land Area／86,000㎡
- Floor Space／63,000㎡
- Employees／1,170
- Main Products／Belt moldings, seats, door frames, door hinges, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	180	150	71
P.M.	Boiler	0.1	0.1	0.006
	Gas carburizing furnace	0.2	0.2	0.002
SOx	Boiler	9.0	9.0	0.3
	Gas carburizing furnace	9.0	9.0	0.007

■Water Pollution Data

Wastewater processing at the Shintoyo Plant is tendered to another group company occupying the same site.
As a result there is no individual data for the Shintoyo Plant.

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
2-Aminoethanol	1,217	0	1	1	0	1,146	69	0
N-alkylbenzenesulfonic acid and its salts※	346	0	346	0	0	0	0	0
Xylene	1,866	1,866	0	0	0	0	0	0
Styrene	100,497	3,015	0	0	0	0	97,482	0
Toluene	7,346	7,346	0	0	0	0	0	0
Bis(2-ethylhexyl) phthalate	38,413	0	0	1,248	0	1,825	35,340	0
Hydrogen fluoride and its water-soluble salts	3,401	680	102	0	2,619	0	0	0
Boron and its compounds	230	0	196	0	17	0	0	17
Poly(oxyethylene) nonylphenyl ether	587	0	1	292	0	0	3	291
Molybdenum and its compounds	126	0	0	0	0	0	125	1
Tris (dimethylphenyl) phosphata	4,656	0	0	151	221	0	4,283	0
Total	158,685	12,908	646	1,693	2,857	2,971	137,302	309

※.(alkyl C=10-14)

Ogawa Plant

- Location／1 Kukui, Ogawa-cho, Anjyo, Aichi 444-1162, Japan
- Completion／December. 1985
- Land Area／88,000㎡
- Floor Space／72,000㎡
- Employees／760
- Main Products／Clutch covers, clutch discs, automatic transmissions, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	150	140	51
	Heating furnace	180	140	47
	Generator	70	35	27
P.M.	Boiler	0.10	0.10	0.002
	Heating furnace	0.20	0.20	0.002
	Generator	0.05	0.05	0.002
SOx	Boiler	3.0	3.0	0.008
	Heating furnace	3.0	3.0	0.03
	Generator	3.0	3.0	0.20

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Zinc compounds (water-soluble)	613	0	49	0	135	0	429	0
2-Aminoethanol	3,381	0	0	28	0	3,353	0	0
Xylene	248	248	0	0	0	0	0	0
Nickel compounds	1,566	0	0	4	6	140	1,417	0
Di-n-heptyl phthalate	1,307	0	0	0	0	0	1,307	0
Boron and its compounds	712	0	178	241	11	19	57	207
Molybdenum and its compounds	179	0	0	0	0	0	177	2
Total	8,007	248	227	273	151	3,511	3,387	209

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	6.5~8.5	6.5~8.5	7.4	7.1
BOD	10	10	4.3	4.6
COD	160	10	8.2	1.7
SS	10	10	1.9	0.8
Oil	2	2	0.3	0.1
Total nitrogen	40	40	18	9.1
Total phosphorus	3	3	0.85	0.4
Coliform bacteria	300	300	0	0
Soluble iron	2	2	0.4	0.31
Soluble manganese	2	2	0.05	——
Zinc	2	2	0.70	0.17
Copper	0.2	0.2	ND	——
Chromium	0.2	0.2	ND	——
Phenols	0.2	0.2	ND	——
Fluorine	2	2	ND	——
Cadmium	ND	ND	ND	——
Cyanide	ND	ND	ND	——
Lead	0.1	ND	ND	——
Chromium(VI)	0.05	ND	ND	——

Nishio Region

(Nishio Plant•Nishio Body Component Plant •Machinery & Equipment Plant)

- Location／80 Kowari, Minaminakane-cho, Nishio, Aichi 445-0801 Japan
- Completion／March. 1967
- Land Area／253,000㎡
- Floor Space／151,000㎡
- Employees／2,340
- Main Products／Pistons, intake manifolds, transmission cases, oil pumps, water pumps, variable valve timings, etc.

■Air Pollution Data

Item	Equipment	Regulated value	Aisin environmental standard	Measured value
NOx	Boiler	230	150	140
	Aluminum melting fumace	180	150	140
	Heat-treatment fumace	180	150	57
	Waste-material incinerator	250	250	32
	Generator	100	100	93
P.M.	Boiler	0.20	0.20	0.002
	Aluminum melting fumace	0.20	0.20	0.19
	Heat-treatment fumace	0.20	0.20	0.002
	Waste-material incinerator	0.25	0.25	0.013
	Generator	0.05	0.05	0.002
SOx	All facilities	3	3	0.48
Hydrogen chloride	Waste-material incinerator	700	500	20

■Water Pollution Data

Item	Regulated value	Aisin environmental standard	Measured value	
			Maximum	Average
PH	5.8~8.6	5.8~8.6	7.4	7.1
BOD	10	10	6.8	2.8
COD	10	10	8.5	4.7
SS	10	10	5.7	1.2
Oil	5	2	0.4	0.1
Total nitrogen	15	15	2	1.3
Total phosphorus	2	2	0.11	0.1
Coliform bacteria	300	300	12	1
Soluble iron	3	2	ND	ND
Soluble manganese	3	2	ND	ND
Zinc	1	1	0.25	0.11
Copper	0.5	0.5	0.03	0.02
Chromium	0.1	0.1	ND	ND
Phenols	0.5	0.5	ND	——
Fluorine	2	2	ND	——
Cadmium	0.1	ND	ND	——
Cyanide	ND	ND	ND	——
Lead	0.1	ND	ND	——
Chromium(VI)	0.05	ND	ND	——

■PRTR-Target Substances

Substance name	Volume handled	Volume released		Transfer volume	Volume recycled	Volume removed	Volume attached to product	Consumption volume
		Air	Water					
Zinc compounds (water-soluble)	154	0	0	0	154	0	0	0
2,2'-azobisisobutyronitrile	166	0	0	0	0	0	166	0
2-Aminoethanol	1,171	0	133	0	0	772	0	266
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocvanate	9,313	0	0	0	0	0	9,313	0
Ethyl benzene	31,885	26,275	0	0	5,610	0	0	0
Ethylene glycol	5,659	283	0	1	0	0	5,375	0
ε-caprolactam	826	0	0	0	0	0	826	0
Xylene	34,718	29,086	0	0	5,632	0	0	0
Chromium and chromium (.) compounds	424	0	0	0	424	0	0	0
Chromium(VI) compounds	1,106	1	4	0	0	448	652	0
Inorganic cyanide compounds※	845	0	0	0	0	845	0	0
Styrene	138	0	0	0	6	0	132	0
Hexamethylenetramine	6,820	0	0	0	0	0	0	6,820
Copper salts(water-soluble, except complex salts)	5,251	0	7	0	0	505	4,739	0
1,3,5-trimethyl benzene	229	229	0	0	0	0	0	0
Toluene	53,138	31,026	0	0	22,113	0	0	0
Nickel compounds	14,281	0	0	0	1,285	0	12,996	0
Hydroquinone	872	0	0	0	0	0	0	872
Phenol	1,381	0	0	0	0	0	1,381	0
Bis (2-ethylhexyl) phthalate	326	0	0	16	15	0	295	0
Hydrogen fluoride and its water-soluble salts	8,178	408	94	6,107	0	0	0	1,569
Hexamethylene diisocyanate	134	0	0	0	70	0	65	0
Boron and its compounds	402	0	96	48	0	55	0	203
Poly(oxyethylene) alkyl ether	5,087	4,796	7	3	0	59	35	188
Poly(oxylyrene) nonylphenyl ether	272	26	0	123	0	0	0	123
Formaldehyde	539	108	0	0	0	0	0	431
Phthalic anhydride	465	0	0	0	0	0	465	0
Methyl methacrylate	115,393	0	0	0	0	51,927	63,466	0
Molybdenum and its compounds	178	0	0	0	0	0	178	0
Dioxins	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Total	299,353	92,239	340	6,298	35,310	54,611	100,083	10,473

※.(except complex salts and cvanates)

(Dioxins:mg-TEQ/year)