Anritsu

Environmental Report 2002

For Protection of the Environment for Harmonious Coexistence of Human and Nature

ANRITSU CORPORATION

Contents

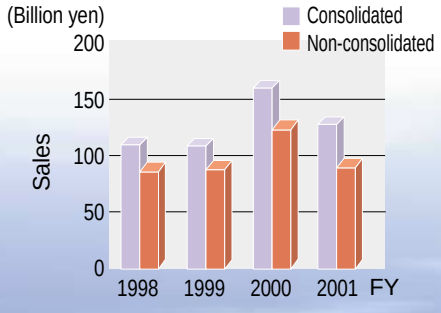
Scope of the Anritsu Environmental Report 2002
Period: April 1, 2001 to March 31, 2002
(The report on the environmental management system is as of July 2002.)
Places: Head Office, Atsugi Works, and Tanasawa Works of Anritsu, Anritsu Industrial Solutions Co., Ltd., Anritsu Engineering Co., Ltd, Tohoku Anritsu Co., Ltd., Onomichi Anritsu Co., Ltd., Anritsu Customer Service Co., Ltd., Anritsu Kousan Kabushiki Kaisha, Anritsu Limited (U.K.)
Scope of activities: Development, manufacturing and sales of information and communication equipment, measuring instruments, devices, and industrial automation systems

Company Profile

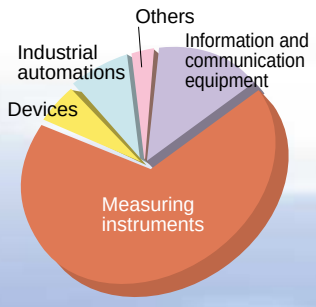
Corporate name: Anritsu Corporation
Head office: 5-10-27, Minamiazabu, Minato-ku, Tokyo
Works: Atsugi Works; 1800 Onna, Atsugi, Kanagawa prefecture
Tanasawa works; 221-8 Tanasawa, Atsugi, Kanagawa prefecture
Representative Directors: Yasuo Nakagawa, Chairman and Representative Director
Akira Shiomi, President and Representative Director
Capital: ¥14,041,910,000 (as of end of March 2002)
Sales Consolidated: ¥131,500,000,000 (in fiscal 2002)
Non-consolidated: ¥91,000,000,000 (in fiscal 2002)
No. of employees Consolidated: 5,220 (as of end of March 2002)
Non-consolidated: 2,670 (as of March 2002)
Major products: Information and communication equipment, measuring instruments, devices and industrial automation systems

Affiliated companies (those covered by this report)

Anritsu Industrial Solutions Co., Ltd.
1800 Onna, Atsugi, Kanagawa prefecture
Anritsu Engineering Co., Ltd.
1800 Onna, Atsugi, Kanagawa prefecture
Tohoku Anritsu Co., Ltd.
301 Aza-Doba, Koriyama, Fukushima prefecture
Onomichi Anritsu Co., Ltd.
3090-9 Sanba-cho, Onomichi, Hiroshima prefecture
Anritsu Customer Service Co., Ltd.
1800 Onna, Atsugi, Kanagawa prefecture
Anritsu Kousan Kabushiki Kaisha
1800 Onna, Atsugi, Kanagawa prefecture
Anritsu Limited (U.K.)
200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.



Review of Sales



Sales breakdown

Message from the President

A summit on the global environment was held in Johannesburg in the year 2002, a landmark year ten years after the first summit on the global environment was held in Rio de Janeiro. Even though each country has had various complicated problems of its own throughout the intervening years, policies to improve the global environment and build a sustainable society have been agreed upon internationally as a challenge for the whole of mankind, and are now beginning to be implemented by each country. The enforcement of environment-related laws for recycling-based society in Japan suggests that environmental problems are a major issue that every business must address in order to survive the global competition.

Anritsu is a leading manufacturer of the instruments and information technology devices required in today's information-based society. Anritsu has also been tackling major environmental issues from an early stage, including the introduction of pollution controls, chemical substance controls, and energy conservation programs at business offices, as well as efforts toward achieving zero emissions and lead-free soldering. We have also been expanding the range of ISO14001 accreditation, the basis of our environmental activities, to include Anritsu Group companies, and have been actively improving environmental management by implementing product assessment, life cycle assessment (LCA), and green procurement.

To tackle the problem of global warming, which has become a major international issue in recent years, it is crucial to save energy in our works and offices as well as resource conservation and energy conservation throughout all business activities including distribution of products and services. In particular, we must reduce the power consumed during use of products, because this directly involves our customers. We started a new system last year to attach environmental labels to those products that have the highest level of environmental consideration in the industry, among many of our environmentally conscious products, and market these as Anritsu Eco products. Although still in the nascent stage, we shall make full use of this approach in developing new products in the future.

In order to promote these environmental management activities, every employee needs to be environmentally aware. Anritsu, under the company philosophy of sincerity, harmony, and enthusiasm, is establishing systems that allow us to meet our customers' needs in the true sense. Making the most of our knowledge of Eco factories and Eco offices in developing Eco products, we offer products that will truly satisfy our customers, thus helping build a recycling-based society.

This environmental report 2002 reviews our environmental activities in the year 2001. We hope that it helps clarify our approach toward environmental conservation and our activities. We welcome your opinions and feedback.

September 2002

Akira Shiomi

Akira Shiomi

President and Representative Director

To create a sustainable society, Anritsu practices environmental management throughout its business.

Concept of Environmental Management

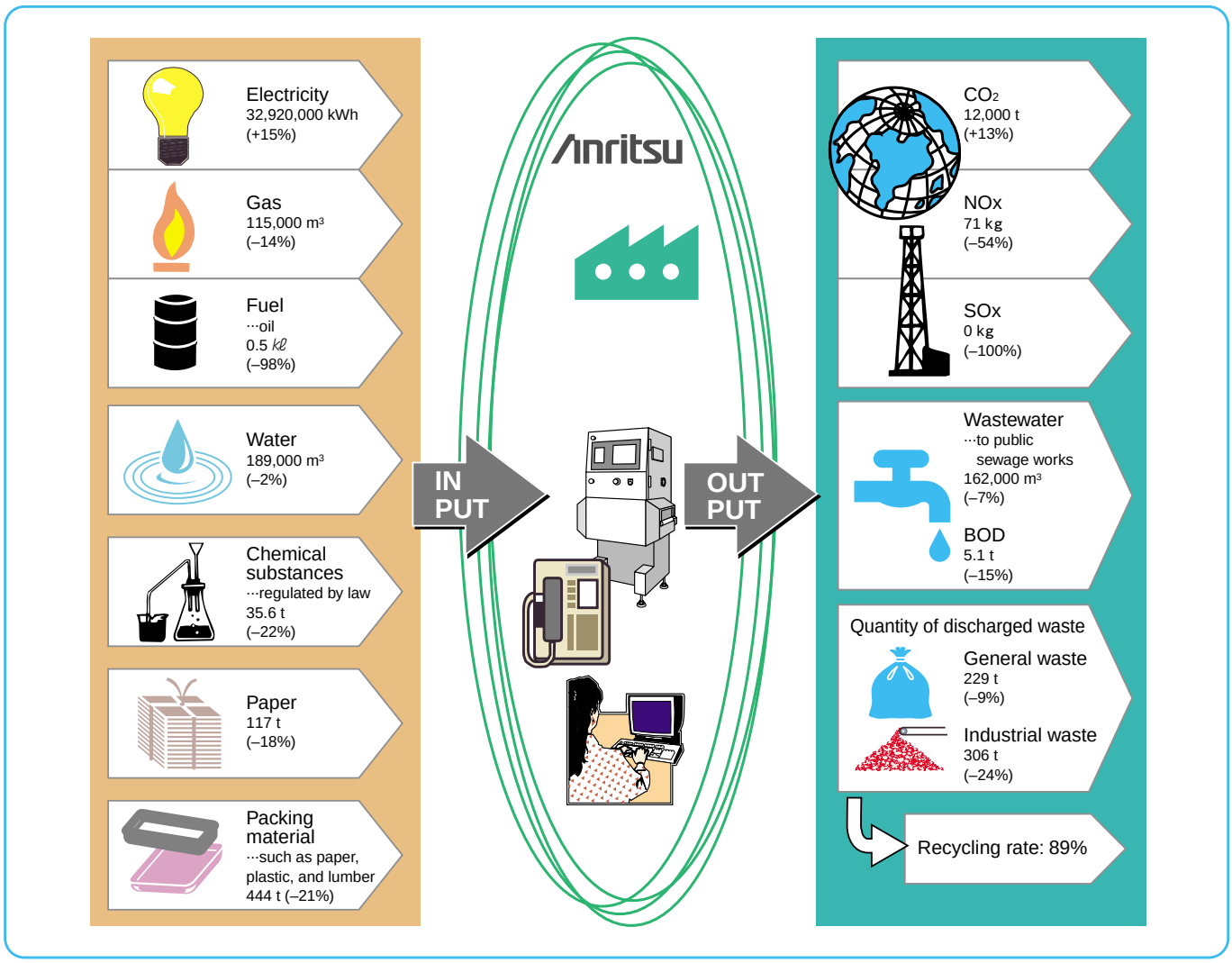
1. Environment-friendly activities of every employee
2. Reduction of environmental load and risks
3. Development and expansion of environmental management system
4. Appropriate profit as a manufacturer and contribution to society through products and services
5. Assessment of the effect of environmental accounting and disclosure of environmental information

Concept of Environmental Management

- Participation in group events for environmental conservation and related group activities
- Supply of Anritsu's products, technology, and service to solve global environmental problems
- Promotion of global environmental protection activities

Environmental Load Mass Balance

The following is the chart of mass balance of environmental load in Anritsu Corporation as a whole (Head office, Atsugi Works, and Tanasawa works).



Percentage in parentheses: Comparison with the previous year
Tanasawa works was newly established in 2001, and has shifted from the preparatory stage close to practical operation, which accounts for the increase of electricity consumption and CO_2 emission from the previous year.

INPUT

Electricity:	Electrical power purchased from power company to be used in works and offices
Gas:	Utility gas used as energy
Fuel:	Crude oil and diesel oil used as energy
Water:	Tap water and ground water (recycled water excluded)
Chemical substances:	Chemical substances that are regulated by law (such as toxic agent, poisonous substance, hazardous substance, organic solvent, and specific chemical substance)
Paper:	Copy paper and EDP paper used in works and offices
Packing material:	Wrapping and packing material of products and packaging material for transportation

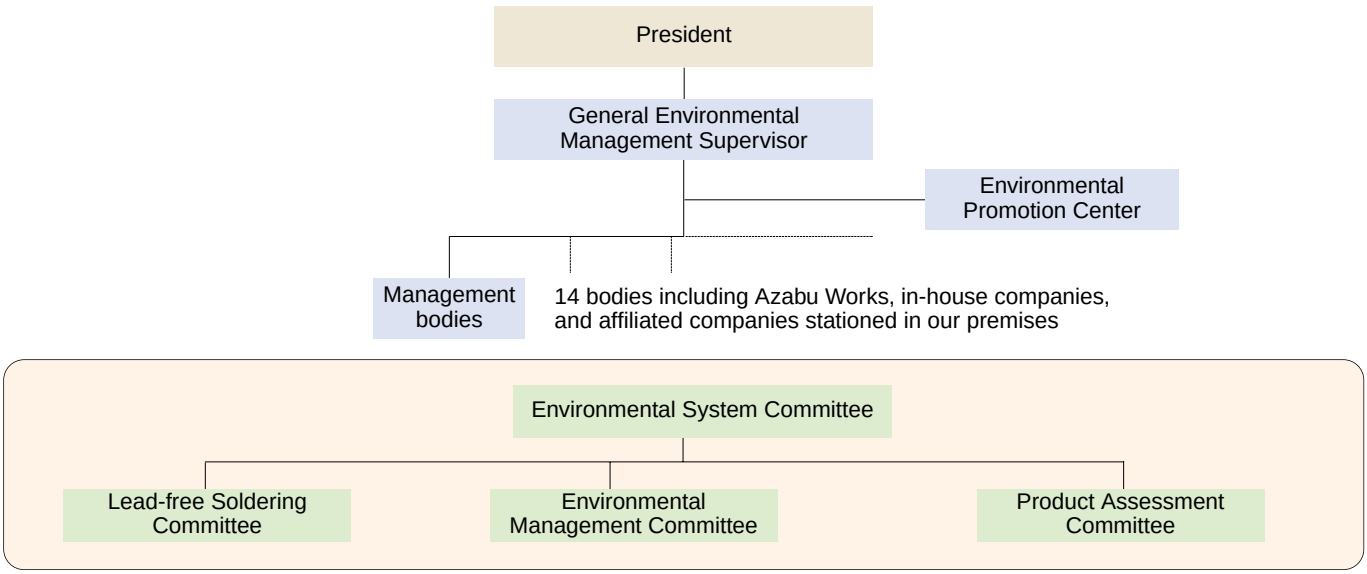
OUTPUT

CO_2:	Carbon dioxide generated as a result of using electricity, gas, and fuel
NOx:	Nitrogen oxide generated as a result of using gas and fuel
SOx:	Sulfur oxide generated as a result of using gas and fuel
Wastewater:	Wastewater discharged from the production system and domestic wastewater
BOD:	Biochemical oxygen demand
General waste:	Waste other than industrial waste that is generated as a result of business activities (such as waste paper, cardboard, and kitchen waste)
Industrial waste:	Of waste generated as a result of business activities, those regulated by the "Waste Disposal and Public Cleaning Law" such as sludge, waste plastic, waste acid, and waste alkali
Recycling:	Using waste materials as resources or raw materials by reusing or recycling them

Environmental Management System

Organization

The Environmental System Committee, chaired by Vice President in charge of environmental management, promotes environmental management across the entire Anritsu Group.
The environmental management activities of Anritsu Corporation are headed by the general environmental management supervisor (Vice President in charge of environmental management). In 2002, affiliated companies including Anritsu Industrial Solutions Co., Ltd., Anritsu Customer Service Co., Ltd., Anritsu Engineering Co., Ltd., and Anritsu Kousan Kabushiki Kaisha, which are located in Atsugi Site, were unified into the organization and new environmental management activities were started. In July 2002, in order to strengthen these activities, we established the Environmental Promotion Center, thus unifying disparate environment-related organizations and promoting environmental management and provision of eco products in a unified manner. As forums for discussion, there are the Environmental Management Committee (in charge of general environmental management system), Product Assessment Committee (in charge of promoting the development of environmentally conscious products), and Lead-free Soldering Committee. Each committee has specialized subcommittees and working groups to assist it.
Tohoku Anritsu and Onomichi Anritsu operate their own environmental management system under the president of each company.



Acquisition of ISO14001 Certification

Last year, an external institution audited a broad range of our system including the Head Office (Azabu Site) and its sales and headquarter departments. The range of registration for ISO14001 accreditation had thus been expanded. This year, we will expand the system and arrange to have an external institution audit Tanasawa Works, which was opened in April 2001, and affiliated companies located in the Atsugi area. The companies in the Anritsu Group that have acquired ISO14001 certification are shown on the right.

Environmental Audit

An external examination by an ISO14001 certification organization, and environmental examinations by NEC affiliates and internal environmental audits were conducted. A reassessment conducted once every three years, was performed last year, and the registration was successfully renewed without any improvement suggestions needing to be made.

Head office Azabu Site　　Atsugi Site

Anritsu Corporation
Located at: 5-10-27 Minami Azabu, Minato-ku, Tokyo 106-8570 (Azabu Site)
Date of expanded registration: August 2001
1800 Onna, Atsugi, Kanagawa prefecture (Atsugi Site)
Date of certificate registration: August 1998
Certification organization: JQA

Tohoku Anritsu Co., Ltd.
Located at: 301, Aza-Doba, Koriyama, Fukushima prefecture
Date of certificate registration: October 1999
Certification organization: JQA

Anritsu Limited (U.K.)
Located at: 200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Date of certificate registration: March 2000
Certification organization: BSI

Environmental Objectives and Results for Fiscal 2001

Anritsu formulated a long-term environmental management plan and has been making steady improvements ever since. In 2001, we executed a zero emission plan toward building a recycling-oriented society. We also drew up a plan for introducing low-emission vehicles as we step up our activities.

[Achievements as against targets for fiscal 2001]

Item	FY 2001 Objective	FY 2001 Result	Evaluation
Waste reduction and recycling			
• Reduction of the volume of industrial waste incinerated/buried by 99% by FY 2005 from that in 1990	82%	90%	○
• Raising of the industrial waste recycling rate to 99% by FY 2005	80%	82%	○
• Achievement of zero emission*1 by 2005	16%	11%	○
Resource conservation and energy conservation			
• Reduction of electricity consumption by 22% by FY 2005 from that in FY 1990 in terms of unit initial input (building floor area)	20%	24%	○
• Reduction of overall carbon dioxide emission by 25% by FY 2005 from that in FY 1990	23%	41%	○
• Annual development of 10 or more models for resource saving of 10% or more (Items: Volume, mass, decomposition time and power consumption)	10 models (average for 4 items)	22 models (average for 4 items)	○
• Reduction of copy paper consumption by 14% by FY 2005 from that in FY 1998	10%	26%	△
Prevention of pollution			
• Maintenance of zero excess over the voluntary control limits for inorganic drain water	0	0	○
• Increase of low-emission vehicles by 30% of all vehicles by FY 2005	7%	29%	○
Reduction of the risk posed by chemicals			
• Action against risks posed by chemicals	6 cases	7 cases	○
• Raising of the usage rate of Anritsu-made MSDS for production purposes to 100% by FY 2003	40%	46%	○
• Reduction of the amount of chemicals under statutory control by 6% by FY 2005 from that in FY 1999	2%	58%	○
• Elimination of the consumption of solder containing lead by the end of FY 2003	—	—	—
Green purchase			
• Increase of green purchase stationary items to 100 by FY 2004	60 items	117 items	○

○: Attained ×: Not attained △: Not attained in some management bodies

*1 Zero emission: The state where the landfill rate of waste (volume reclaimed/overall volume of waste generated) is 1% or less

Environmental Objectives for Fiscal 2002

We shall actively address environmental challenges in fiscal 2002 as a global enterprise. The new objective in meeting our social responsibilities is the provision of "Eco products" (development of environmentally conscious products). These will constitute a third major pillar in our environmental management together with "Eco factories" and "Eco offices."

[Environmental Objectives for Fiscal 2002]

	Item	FY 2002 Objective
	Waste reduction and recycling	
	• Reduction of the volume of industrial waste incinerated/buried by 99% by FY 2005 from that in 1990	88%
	• Raising of the industrial waste recycling rate to 99% by FY 2005	89%
☆	• Achievement of zero emission by 2005	9%
☆	• Reduction of the volume of industrial waste generated by 20% by FY 2005 from that in 1999	17%
	Resource conservation and energy conservation	
	• Reduction of electricity consumption by 23% by FY 2005 from that in FY 1990 in terms of unit initial input (building floor area)	22%
	• Reduction of the overall carbon dioxide emission by 36% by FY 2005 from that in FY 1990	35%
	• Reduction of copy paper consumption by 18% by FY 2005 from that in FY 1998 in terms of unit initial input (number of employees)	15%
	Eco products	
☆	• Development of environmentally conscious products*1	5 models
	• Annual development of 10 or more models for resource saving of 10% or more (Items: Volume, mass, decomposition time and power consumption)	10 models (Average for 4 items)
☆	• Annual development of 5 or more models for power consumption improvement of 30% or more	5 models
	• Elimination of the consumption of solder containing lead by the end of FY 2003	—
	Prevention of pollution	
	• Maintenance of zero excess over the voluntary control limits for inorganic drain water	0
	• Increase of low-emission vehicles by 80% of all vehicles by FY 2005	30%
	Reduction of the risk posed by chemicals	
	• Action against risks posed by chemicals	4
	• Raising of the usage rate of Anritsu-made MSDS for production purposes to 100% by FY 2003	70%
	• Reduction of the amount of chemicals under statutory control by 46% by FY 2005 from that in FY 1999	43%
	Collection of environmental needs	
☆	• Increase of the number of environmental needs collected from customers and the number of feedback to 4 times that of FY 2000 by FY 2005	2 times

☆: New plan *1 Environmentally conscious products: Products that meet our environmentally conscious criteria

Environmental Accounting

Environmental accounting

In the past, we recorded the expenses incurred for environmental preservation, which were divided into nine categories within our organization, under the heading "environmental investments." In 2000, we introduced environmental accounting that conforms to the Environment Agency's "Guide to Establishment of Environmental Accounting System," since when we have published environmental accounting information together with our environmental preservation activities in our annual environmental report. The accounting information released for 2001 follows the "Environmental Accounting Guideline (fiscal 2002)" published by the Ministry of the Environment, and includes the results of some of our group companies. We shall continue to make our environmental accounting system and information clearer and more transparent.

Purpose of environmental accounting

The purpose of environmental accounting is to quantitatively assess the cost and effect of environmental preservation activities, and hence strengthen such activities for the continuous growth of the company. Furthermore, the environmental accounting information made public in our environmental report provides investors and local residents with the information they need to evaluate our company.

Coverage and period of system

The environmental accounting data was collected for Anritsu Corporation (Azabu area, Atsugi area and Tanasawa area), Anritsu Customer Service Co., Ltd. and Anritsu Kousan Kabushiki Kaisha, and will be extended to encompass every affiliated company in the future. The period of the environmental accounting covers from April 2001 to March 2002 (fiscal 2001).

Costs in fiscal 2001

The costs in fiscal 2001 are presented below.
Personnel expenses of the environmental preservation organization were allocated according to the kind of activities in order to clarify the relation between the activities and the cost, thus reducing these expenses by 86% from the previous year (202M yen).

Environmental preservation cost					Effect	
Category	Breakdown		Investment (in million yen)	Cost (in million yen)	Economic effect (in million yen)	Volume reduction effect
Business area cost	Cost for pollution control (risk measures included)		29.2	90.0	1.4 (148.0)*1	—
	Global environmental preservation cost	Prevention of global warming	358.9	210.9	15.6	348 (t-CO_2)
	Resource recycling cost	Resource recycling/ utili-zation activities	2.3	29.6	28.2	24(t) (Paper reduction) 250(t) (Reduction of waste incinerated and buried)*2
		Waste disposal cost	—	100.9	—	
Upstream/ downstream cost	Green purchase/procurement cost		—	8.8	0.5 [76.7]*3	[1,711 (t-CO_2)]*3
	Design of environmentally conscious products		—	79.4		
	Recycling and treatment of products, containers and packaging		—	7.9		
Management activity cost	Environmental education/manpower training		—	50.2	—	—
	Operation and maintenance of EMS and internal audit		—	80.9	0.1	—
	Environmental load monitoring and measurement cost		—	7.4	—	—
	Personnel expenses of environmental preservation organization		—	28.3	—	—
Social activity cost	Protection, cleaning and enhancement of scenic beauty	Greening and upkeep of greenery	—	9.7	—	—
	Support and financial contribution to community groups, environmental preservation bodies, etc.		—	1.3	—	—
	Disclosure of information		—	7.3	(1.0)*4	—
Research and development cost	Research and development to reduce environmental loads		0.7	5.2	—	—
	Total		391.1	717.8	45.8 (194.8)*5	—

∗1 The value in parentheses is presumed profit, which is the sum of the profit excluding environmental repair and the profit excluding the payment of fines or penalties for the purpose of complying with rules.
∗2 Reduction of waste by incineration and landfill: Recycled volume calculated by subtracting the volume incinerated or buried from the total volume of industrial waste generated
∗3 The customers' reduction in energy consumption when the product is used (4794 MWh/year) is presented in terms of the economic effect (charge for electric power) and the equivalent volume of carbon dioxide discharged. Not included in the total economic effect.
∗4 The value in parentheses is presumed profit estimated by converting the effect of an article in a public notice into an advertising expense.
∗5 The value in parentheses is the total profit including presumed profit.

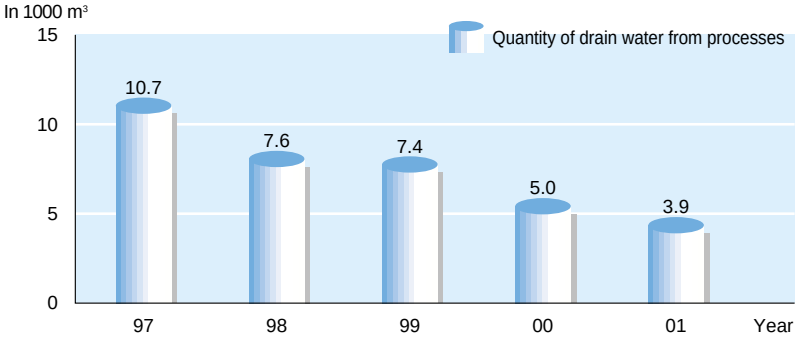
Environmental Preservation

To prevent environmental pollution, Anritsu is taking various countermeasures against risks and making efforts to preserve water and air quality and prevent noise pollution, voluntarily enforcing stricter controls than required by law.

Drain water

In Atsugi Works, both the quality and quantity of drain water from the works have changed as a result of reviewing the production system. By introducing a treatment process without using plating, which is a major cause of waste water including toxic substances, as well as a surface treatment process where toxic substances are not used, and by scaling down the plating facilities, we are helping conserve water quality at the headstream. In addition, we take all possible precautions to preserve water quality, including daily analysis of drain water, maintenance and inspection of water treatment facilities and instruments, and establishment of fail-safe waste water treatment facilities.

Quantity of drain water (Atsugi Works, drain water from processes)



Measurement of drain water properties (Atsugi Works, drain water from processes)

Unit: mg/ℓ

Item measured	Water discharge criterion		Actual measurement (max.)
	Criterion stipulated by law or ordinance	Voluntary control criterion	FY 2001
Water temperature °C	40	35	29.9
PH	>5.7, <8.7	6.0 ~ 8.4	6.1 ~ 8.2
BOD	300	180	17.5
SS	300	180	3.8
Extractive substance n-hexane	5	3	1.8
Iodine consumption	220	130	1.9
Phenols	0.5	0.3	Less than the specified lower quantitative limit
Copper and its compounds	3	1.8	0.79
Zinc and its compounds	3	1.8	0.23
Iron and its compounds	10	6	0.14
Manganese and its compounds	1	0.6	0.04
Chromium and its compounds	2	1.2	0.24
Fluorine compounds	15	9	1.67
Nickel compounds	1	0.6	0.35
Cyanide	1	0.6	0.24
Lead and its compounds	0.1	0.06	0.036

Ground water

Anritsu takes strict measures to prevent the leakage of chemical substances generated from the facilities that could pollute the ground water. We also periodically analyze organic chlorine substances, which have become a major social issue.

An analysis of six substances from two wells in Atsugi Works such as trichloroethylene and tetrachloroethylene revealed that although the amounts of trichloroethylene and tetrachloroethylene in one of the wells exceeded the environmental standard, all the other measurement points showed values far lower than the criterion.

With regard to the contamination stated above, a soil analysis was conducted by a measurement and certifying agent. The results showed that none of the substances exceeded the environmental criterion, and that the six substances were rarely detected deep in the soil (lower than the specified lower quantitative limit of 3 m or lower from the soil surface). In addition, since we have never used tetrachloroethylene, the contamination was not caused by our production activities.

Annual analysis of ground water in Tohoku Anritsu also shows that the total quantity of all substances generated is lower than the environmental criterion. We will continue to ensure that ground water is kept clean through periodic analysis and monitoring.

Result of analysis of ground water (fiscal 2001)

Unit: mg/ℓ

Item measured	Environmental criterion	Atsugi Works		Tohoku Anritsu (Max.)
		No. 1 well (Max.)	No. 2 well (Max.)	
Trichloroethylene	0.03	0.016	0.041	Less than the specified lower quantitative limit
Tetrachloroethylene	0.01	0.0083	0.061	Less than the specified lower quantitative limit
1,1,1-trichloroethane	1.0	0.0063	0.0055	0.0016
1,1-dichloromethane	0.02	0.005	0.006	—
Dichloromethane	0.02	Less than the specified lower quantitative limit	Less than the specified lower quantitative limit	Less than the specified lower quantitative limit
Cis-1,2-dichloroethylene	0.04	Less than the specified lower quantitative limit	0.012	Less than the specified lower quantitative limit

Environmental Preservation

Air

In Anritsu's Head Office, fuel oil boilers that had been used for heating in winter were decommissioned in April 2001, and the air conditioning system was changed to an electric system. We thus eliminated facilities that cause air pollution controlled by laws and regulations. However, with regard to substances that may have an impact on air quality, we are still voluntarily measuring these substances periodically to maintain good air quality. Tohoku Anritsu has fuel oil boilers that fall under the Air Pollution Control Law, but they are operated under strict voluntary controls.

Measurement of air (Atsugi Works, exhaust gas cleaning device) Unit: ppm

Item measured	Discharge criterion		Actual measurement (max.)
	Criterion given by prefectural ordinance	Voluntary control criterion	FY2001
Hydrogen chloride	5	3	Less than the specified lower quantitative limit
Cyanide	10	6	0.3

Measurement of air (Tohoku Anritsu, Fuel oil boiler)

Item measured	Unit	Discharge criterion		Actual measurement (max.)
		Criterion given by the law	Voluntary control criterion	FY2001
Dust and soot	g /m³N	0.3	0.24	Less than the specified lower quantitative limit
Sulfur oxide	m³N/h	4.37	3.50	0.17
Nitrogen oxide	ppm	180	144	110

Noise

In 1981, Anritsu adopted a system to investigate facilities at the time of their installation to minimize noise pollution. We are also working to prevent noise pollution through daily facility checks and periodic inspections.

Noise measurement (Atsugi Works) Unit: dB

Location of measurements	Regulatory criterion		Actual measurement
	Criterion given by prefectural ordinance	Voluntary control criterion	FY2001
Eastern boundary line of the Atsugi Works premises	70	68	49
Western boundary line of the Atsugi Works premises			50
Southern boundary line of the Atsugi Works premises			53
Northern boundary line of the Atsugi Works premises			55

Waste Reduction Activities

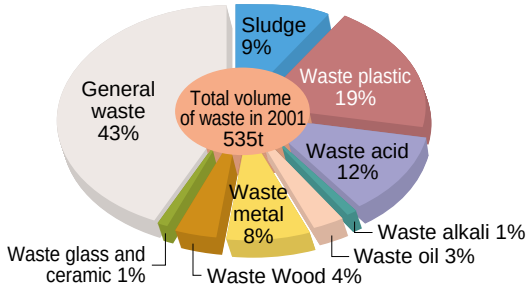
Anritsu is tackling the environmental pollution caused by the increase of waste produced by society and the difficult problem of final treatment facilities, thus trying to achieve zero emission and create a recycling-based society.

To achieve zero emission

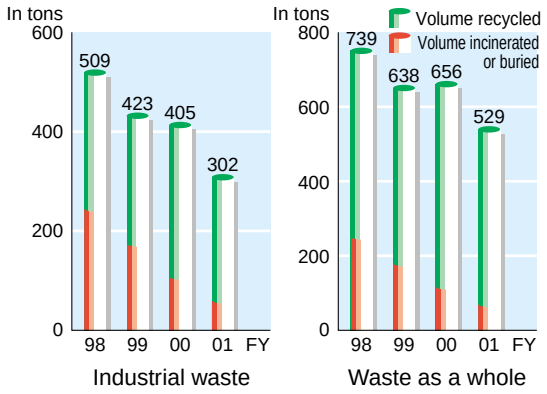
We defined zero emission as the state where the percentage of waste buried is no more than 1% of the total quantity of waste generated. We therefore set the goals of reducing the quantity of industrial waste incinerated and buried, and of improving the recycling rate. These activities encompass Atsugi Works, our production plant, and the Head Office as well from fiscal 2001.

In fiscal 2001, we continued recycling waste that had already been in the recycling process (such as metal, glass, and wood chips). Furthermore we promoted activities to convert waste oil into cement baking fuel, increase the rate of recycling waste acid and waste alkali sludge (recycled soil and activated sludge used) to 100%, and to recycle waste plastic (blast furnace reducer, iron making material, creation of RDF, etc.). The rate of recycling industrial waste has now reached 82% (objective: 80%), and that of waste including general waste has reached 89% (objective: 84%).

Through environmental education that is given to employees every year and through the company newsletter and message board, we have raised their awareness and motivation toward the zero emission goal, including fractional recovery of waste.



Breakdown of industrial waste (generated at Head Office, Atsugi Works, and Tanasawa Works)

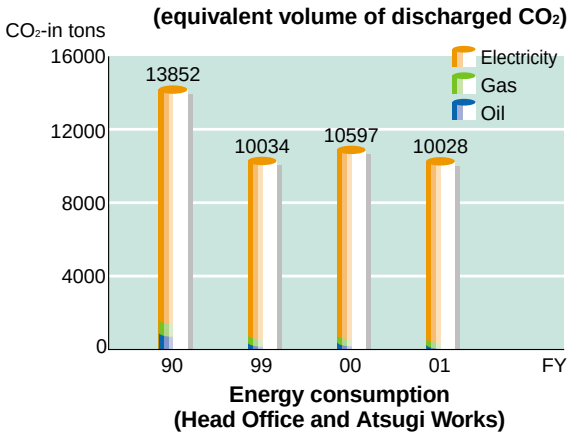


Transition of generation of waste (at Head Office and Atsugi Works)

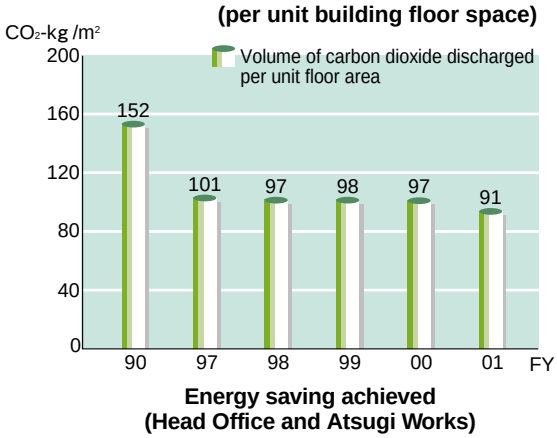
Energy Conservation Activities

Energy conservation is an important principle in the reduction of CO_2 emission and prevention of global warming. Anritsu is committed to saving energy such as the electricity used for everyday purposes.

To meet the target of reducing the unit initial input by 36% by FY 2005 from that in FY 1990, we are actively reducing the consumption of electrical energy, which accounts for the majority of energy used in Atsugi Works and the Head Office. In fiscal 2001, the heating system was changed from fuel oil boilers to an electric system, which drastically increased the electric power consumed. To compensate for the increase, we introduced a chilled/hot water storage system to effectively use nighttime power. In Atsugi Works, inverters were installed in mechanical facilities and lighting fixtures, the air-conditioning system was divided into zones, and transformers were changed to the low-loss type. The air-conditioning system of the clean room was also improved, and each facility and area was reviewed for possible ways to save energy. These efforts resulted in the reduction of annual power consumption of 970 MWh (approximately 3% of total electricity consumption, or 350 tons equivalent in discharged carbon dioxide). As a result of awareness activities through the company magazine and message boards, employees now routinely turn off unnecessary lights every day.
The volume of CO_2 emission in fiscal 2001 per unit building floor space was 91 kg/m^2 (down 40% from fiscal 1990), thus we achieved the target reduction. Although the value may be the result of the prolonged recession which forced us to curtail operations, we shall continue to implement energy conservation activities.



Energy consumption
(Head Office and Atsugi Works)



Energy saving achieved
(Head Office and Atsugi Works)

Green Purchasing

Purchase of green office supplies

We have been promoting green purchasing, which means choosing environment-friendly office supplies where possible, according to our own standard. We set a goal of achieving 100% green purchasing by fiscal 2004, but thanks to the dedication of our purchasing department and the growing importance of environment-friendly products, we listed 117 items (100% of the targeted items) in fiscal 2001, and achieved the goal well ahead of schedule. We will maintain this stance and extend it to our affiliated companies.

Purchase of low-emission motor vehicles

As a member of the local community and the earth, it is critically important to take measures against air pollution and global warming caused by the exhaust gas from motor vehicles. Since we use motor vehicles in our business, we favor purchasing of low-emission motor vehicles.
To meet the criteria of the government and seven other prefectural and municipal administrative bodies, we are striving to achieve the goal of 80% low-emission motor vehicles by fiscal 2005. In fiscal 2001, we purchased 21 low-emission vehicles including hybrid cars for use by administrators.

Management of Chemical Substances

Management of chemical substances by Anritsu

The Anritsu Group enters data on the use of chemical substances by each company every 3 months into a database, which is controlled by the Environmental Management Department. The "Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" (PRTR Law) that came into effect last year requires businesses that use more than a certain amount of specified chemical substances to notify the amounts discharged or transferred. No companies in the Anritsu Group used more chemical substances than the amount specified by the law. The table on the right shows the chemical substances used by each company in the Anritsu Group.

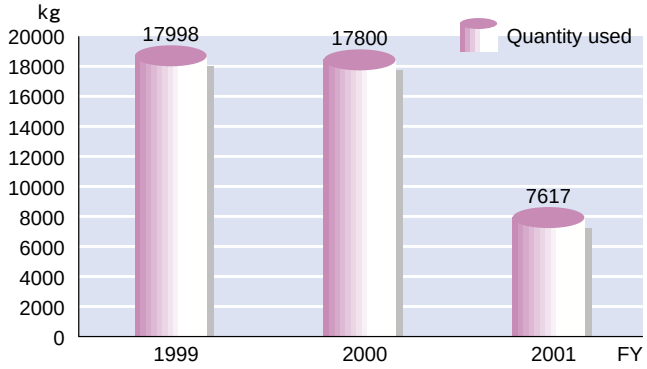
Use of chemical substances controlled by the law Unit: kg

	Atsugi Site	Tanasawa Site	Tohoku Anritsu	Onomichi Anritsu
Toxic substance	213	0	0	0
Deleterious substance	2321	452	241	1
Specified substance*1	1331	199	0	0
Organic solvent*2	5633	1252	901	203
Hazardous material*3	31779	1409	1324	279

*1 Ordinance on the Prevention of Hazards due to Specified Chemical Substances
*2 Ordinance on the Prevention of Organic Solvent Poisoning
*3 Fire Defense Law

Reduction of chemical substances

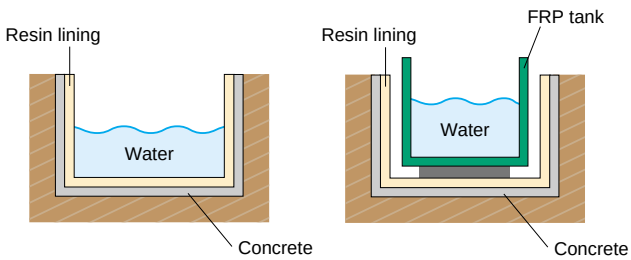
Atsugi Works is working to reduce the use of legally-controlled chemical substances in product manufacturing as part of our environmental activities. Although we had set a goal of reducing the amount used in fiscal 1999 by 2%, we succeeded in achieving a 58% reduction. The reduction in production output from that of fiscal 2000 surely slashed the amount of chemical substances used. Nevertheless, our efforts including decommissioning some of the treatment processes, extending the lifetime of cutting fluid used in cutting processes, and overhauling the operation of surface treatment equipment also contributed to the reduction.



Transition of use of legally-controlled chemical substances

Risk Management

The environmental impact evaluation conducted last year revealed that untreated water might be discharged from Atsugi Works in the event of an earthquake, which might break the underground tank of the inorganic waste water treatment facilities. We therefore changed the tank to a double tank last year, to eliminate the possibility of leakage of untreated water even if the internal tank were to break. We took the opportunity to conduct a visual check of the internal tank for problems.
Tohoku Anritsu does not discharge water from its production process. However, it was judged that the water discharged from the boiler might exceed the pH specified by the law. We therefore installed a pH monitoring device and an emergency shutout valve that stops the discharge of water in case the specified pH range is exceeded.



Countermeasures against risks for an inorganic waste water treatment facility tank

Occurrence of chemical substance leakage accidents

In 2001, there was no chemical substance leakage accident that could have had an adverse effect on the environment outside the company. However, there was one accident: while waste cooking oil in a can was being carried on a carriage, it fell and the waste oil leaked. Since the accident contaminated part of the soil, we recovered the contaminated soil and disposed of it appropriately. To prevent similar accidents, devices were fitted to the carriage to prevent falling, and the workers in charge were given training.

pH monitoring device

Emergency shutout valve

Environmental Label – "Anritsu Eco Product" System

In October, 2000, we initiated the "Anritsu Eco Products" system which has unique environment-friendliness criteria (conforming to ISO14021 type II) to enhance the environment-friendliness of our products and to promote their environmental benefits for consumers. Operation of the system began in 2001.

Major environmentally conscious criteria

- Top-level environmentally conscious properties in the industry
- Full information disclosure
- Product assessment completed, and objectives achieved
- Manufacturing assessment completed
- Volume of discharged CO_2 evaluated by LCA

Anritsu Eco Product

"Anritsu Eco Products" carry the mark shown on the left in catalogs, together with environmental information about the product.

Anritsu Eco Product

●MD1230A Data quality analyzer

Top-class environment-friendliness in the industry

- Volume: reduced by 54%
- Mass: reduced by 29%
- Power consumption: reduced by 25%

Anritsu Eco Product
Lightweight
Power saving
Small size

The MD1230A measuring instrument is compatible with MPLS[*1], which is required for the effective transmission of Internet traffic to be developed in the future, and the next-generation IPv6[*2]. The MD1230A allows network performance evaluation and network monitoring to be performed with its integrated load test function of IP[*3] transmission devices and IP network monitoring function.

●MS8609A Digital portable radio transmitter tester

Top-class environment-friendliness in the industry

- Volume: reduced by 45%
- Mass: reduced by 28%
- Power consumption: reduced by 25%

Anritsu Eco Product
Lightweight
Power saving
Small size
(Conventional product ratio)

The MS8609A, with a built-in spectrum analyzer that can measure up to 13.2 GHz, modulation analyzer, and power meter, allows high-speed accurate measurement of the transmission characteristics of base stations and mobile devices of CDMA[*4]. It is used for evaluating test items of the transmission system conforming to the 3GPP[*5] standard and for analyzing 3 Mbit/s broadband signals now under review by MIT-2000[*6] for future use. The embedded measurement software customized to each communication system allows the MS8609A to function as a multi-system measuring instrument.

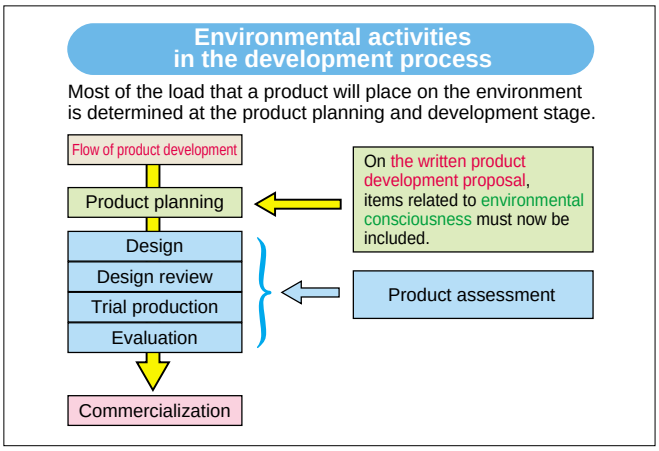
*1) MPLS: Multi Protocol Label Switching. Packet transfer technology using label switching system
*2) Ipv6: Internet Protocol version 6. Revised version of the communication protocol of the Internet network layer
*3) IP: Internet Protocol: Protocol to establish communication path between computers
*4) CDMA: Code Division Multiple Access. Digital cellular system using spread spectrum communication technology
*5) 3GPP: Third Generation Partnership Project. Interdisciplinary research project organized to review global level standard for IMP-2000
*6) IMT-2000: International Mobile Telecommunications. The next-generation international standard mobile communication system under view by ITU (International Telecommunication Union)

Environmentally Conscious Products

In July 2001, we separated our "Environmental engineering group", which had belonged to engineering design department technology division, from other engineering groups, in order to promote the development of environmentally conscious products, and allowed it to operate as an independent "Environmental engineering department." The system of developing environmentally conscious products, with the major objective of energy conservation, resource conservation and hazardous substance free, has thus been strengthened. In July 2002, the system was turned into the "Eco Product Promotion Department Environmental Promotion Center," and we will continue to enhance the environment-friendliness of all of Anritsu's products.

Efforts beginning at the development stage

To create top-class environmentally conscious products, the impact of the product on the environment must be considered from the product planning stage. We therefore revised our regulations, requiring environmental parameters to be written into the development proposal. Thus, not only technical personnel who are directly involved in the planning and development of products, but also sales and marketing personnel will make concerted efforts to create truly environmentally conscious products.



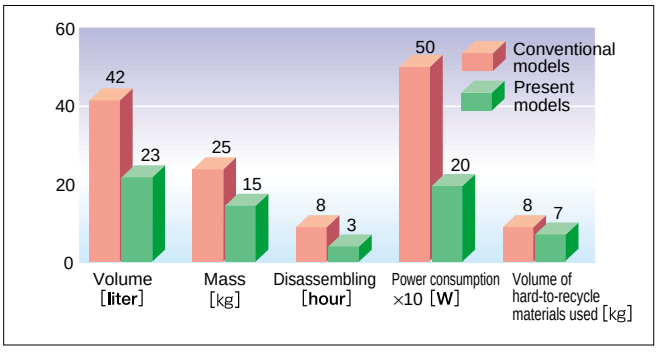
Product assessment: Spectrum analyzer

The MS2687A is a spectrum analyzer with a broad dynamic range, resolution bandwidth, and high sweep that make it ideal for evaluating next-generation radio communication systems and devices.

Improved points (reduce the size, weight and power consumption)

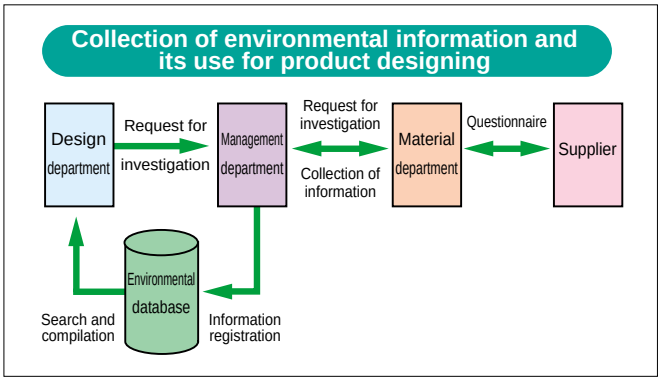
- Digitalization of analogue circuits
- Adoption of Field Programmable Gate Array (FPGA)
- Adoption of compact, efficient power source unit

MS2687A Spectrum Analyzer



Green procurement

In June 1999, we established the "Anritsu Green Procurement Guideline for Product Development," thus promoting the procurement of environment-friendly materials. We ask our material suppliers to provide environmental information and answer questionnaires, and the information is then compiled into our hazardous substance database and energy-saving components database. We are planning to combine the system of collecting information from our material suppliers and our in-house design system into a new system that allows us to select environment-friendly products on a priority basis at the design and development stage.

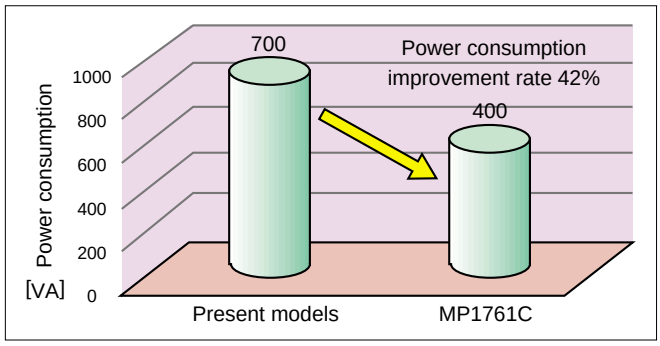


Environmental partner enterprise accreditation system

In September 2001, we set up an environmental partner enterprise accreditation system to evaluate the environmental control activities of companies to which we subcontract the development, manufacturing and servicing of products. By working closely with these authorized partners, we encourage the development of environmentally conscious products.

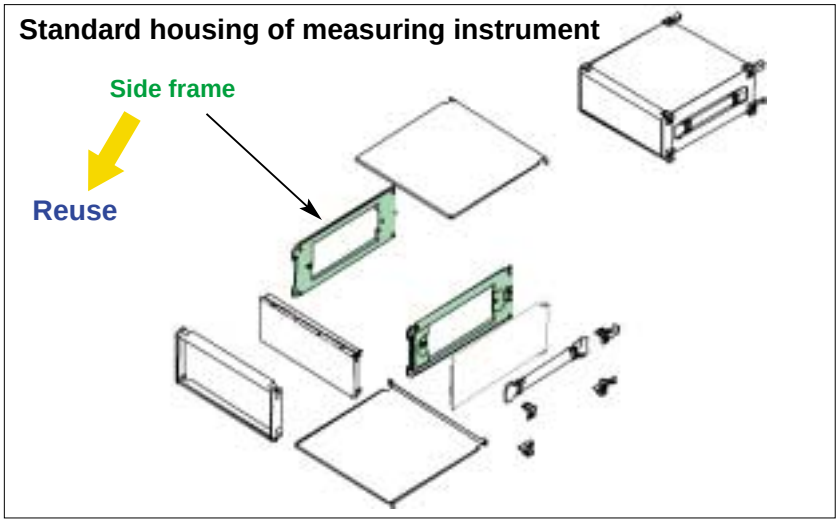
Energy conservation designing

To prevent global warming, we are creating a database of energy conservation techniques and low power consumption components that can be used for designing energy conservation products.
In the MP1761C pulse pattern generator, power consumption was reduced by changing the digital signal processing methods and tightly integrating components by using FPGA, thus reducing power consumption by 42% compared with that of all Anritsu products.



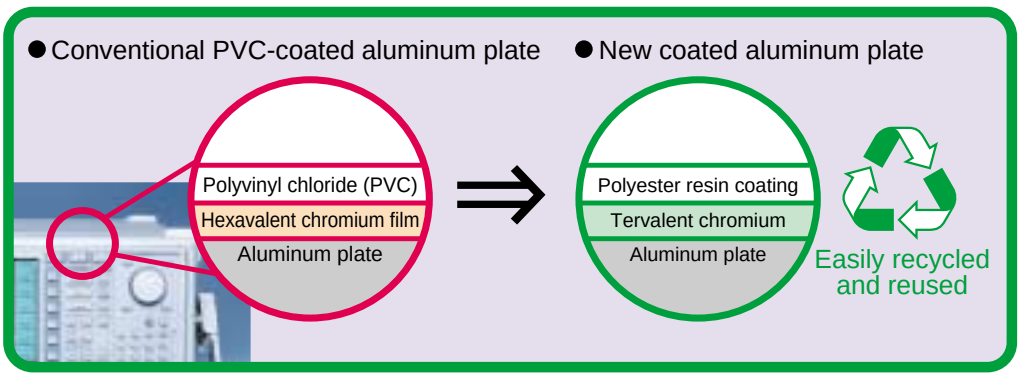
Resource conservation designing

To utilize resources effectively, we are strongly committed to resource conservation throughout the lifecycle of our products. Approaches include miniaturization of products, reuse of parts, simplification of separating or disassembling products to increase recycling efficiency, and the use of materials that can be easily recycled. In fiscal 2001, we started working on reusing the housing of measuring instruments, starting with reusing side frames (die-cast material).



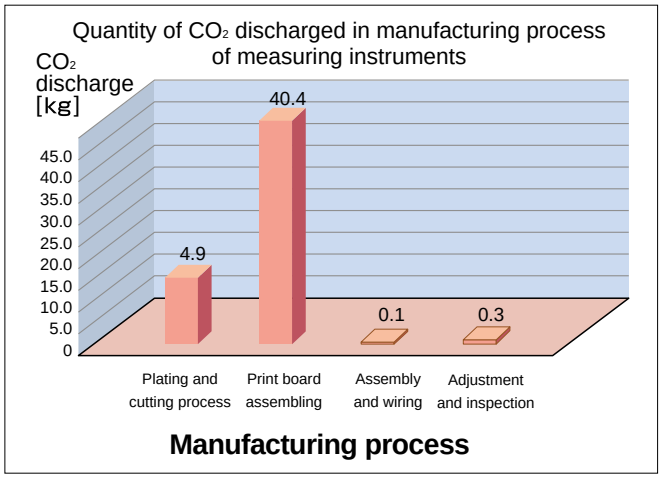
Clean products

The key approach to building clean products is to prevent hazardous substances from spreading. To achieve this goal, we are: (1) reducing toxic substances, (2) replacing toxic materials with less toxic ones, and (3) assessing the concentration of those substances in our products. In fiscal 2001 we eliminated the use of hazardous hexavalent chromium and polyvinyl chloride from PVC coated aluminum plate that had been used for the housing of our products, and started using our newly-developed coating of aluminum plate (patent pending). Furthermore, for the coating of sheet metal parts other than coated aluminum plates, we established a coating process that does not use hexavalent chromium or lead compounds, and started using them for our products.



Assessment of manufacturing process and life cycle assessment (LCA)

We are conducting life cycle assessment (LCA), which is a quantitative method of assessing the environmental load of products over the whole manufacturing process, from the collection of resources to final disposal. We found that the quantity of CO_2 discharged in the manufacturing process accounted for as much as 30% of the overall quantity, which places the second largest load on the environment other than actual use of the products. Therefore, in December 2000 we started a new method of assessing the manufacturing process of some of our products, to numerically evaluate the environmental impact of the product in the manufacturing process, such as discharged quantity of CO_2, quantity of materials used, and the quantity of hazardous materials used. We will continue to reduce the environmental load in the manufacturing process.

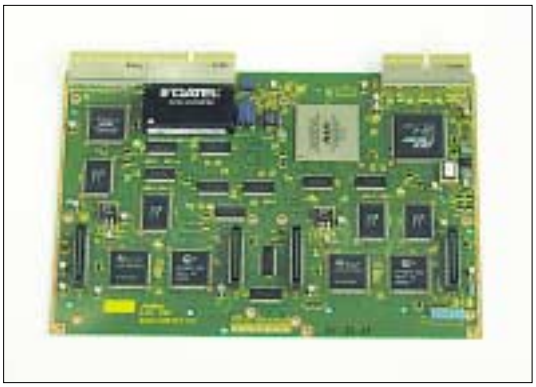


Packaging

In addition to developing environmentally conscious products, we are reducing the packing boxes and buffer materials, using recyclable materials, and developing structures that can easily be disassembled and sorted. In fiscal 2001, we reviewed packaging materials, and reduced the volume of cardboard used for inner packaging by making it thinner. The quantity of packaging materials used in fiscal 2001 that must be notified under the Containers and Packaging Recycling Law was 731 kg.

Lead-free soldering

Since the soldering now used for electronic devices includes lead, the lead contained in discarded products may be eluted by acid rain and cause environmental pollution. In 1998, we set up the Lead-free Soldering Committee to investigate the use of lead-free soldering. We have studied soldering materials and facilities, developed highly-reliable packaging materials, and collected information to achieve lead-free soldering of purchased electronics components, and have now established the core technology for practical use. In 2001, we started trial application and evaluation, and succeeded in a trial of lead-free soldering in typical products of each company. This marked the first step toward full-scale development of new products. In 2002, we will manufacture products adopting lead-free soldering on a commercial basis and expand the range of application. By 2004, we aim to be using lead-free soldering in every new product.



Printed circuit board with lead-free soldering

Recycling of used products

The six laws regarding environmental management that were enacted and revised in 2000 accelerated the progress toward a recycling-based society. Statutory controls on our products are far off, but the trend is undoubtedly toward the concept of "extended producer responsibility." In view of the purpose of these laws and the requirements of society, we established the Recycling Center in December 2000 where used products are disassembled. In 2001, we started preparing for compliance with the relevant laws toward full-scale operation.

Recycling Center

Education and Enlightenment

Intra-company education

We give every employee environmental education according to position and occupation, to instill a strong awareness of global environmental preservation in everyday work and to promote environmental improvement as eco-minded employees. Last year, we invited Professor Ryoichi Yamamoto of Tokyo University to give lectures on environmental protection and corporate responsibility to employees ranging from managers to executives. The lectures, all of which were published in our technical magazine Anritsu Technical, promoted greater awareness not only among employees but also our customers of the significance of environmental preservation and corporate responsibility. Meanwhile, to achieve lead-free soldering in our products, employees of every department and affiliated companies were trained on the new soldering and manufacturing techniques, and were informed of our plans.

Major environmental education

Name of program	Time of development/ No. of participants
Training of new employees	April/47
Lecture on environmental technology by external lecturer	May/120
Lead-free soldering seminar	May/202
Education of executive officers	June/72
Environmental technology seminar for sales personnel	October/63
Practical employees training	December/78
Environmental technology seminar for each company	March/158

Lecture by Professor Ryoichi Yamamoto on environmental technology

Education of executive officers

Enlightenment activity

1) Company magazine

Since July 2001, the importance of developing environmentally conscious products and systems have appeared serially in our company magazine under the title "Development and promotion of eco products."

2) Intra-company exhibition

The Exhibition of Products of Cooperating Companies for Anritsu (exhibition by 125 companies, number of visitors: 1050) was held on the theme of "Analyzing the real value of QCD*1&ECO." In the environmental corner, Anritsu eco products and the flow of developing environmentally conscious products were exhibited and explained. We also held the QU*2 exhibition (number of visitors: 917) on the theme of "2001 Exciting QU exhibition, CS promotion, and ECO awareness." In the technical corner, we exhibited "Automated compilation of data on hazardous substances."

*1) QCD: Quality, Cost, and Delivery *2) QU: Quality Up

Serialized publication in company magazine

Exhibition of products of cooperating companies for Anritsu

3) Distribution of e-mail on environmental issues

We distribute a weekly e-mail to our executive officers regarding the industry situation to keep them abreast of environmental issues.

Distribution of e-mail on environmental issues

4) Enlightenment through intranet

Anritsu Limited also provides education on environmental issues through its intranet. The newsletter distributed by intranet provides information on the progress of the environmental campaign as well as topics concerning the environment inside and outside the company, and talks about problems regarding waste, thus helping employees become aware of environmental issues.

Enlightenment of cooperating company employees

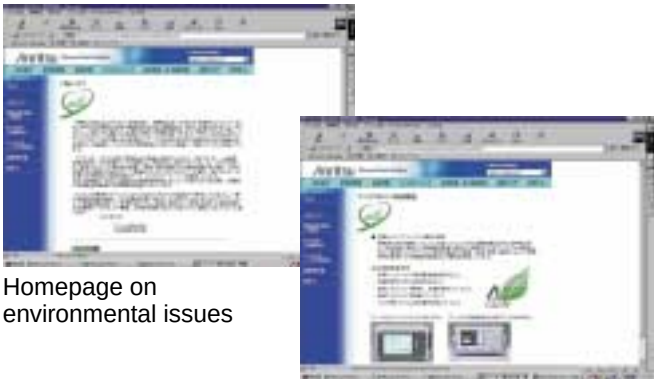
In 1981, we established the Anritsu Cooperating Companies Safety and Health Committee consisting of cooperating companies to which we commission plating, cutting and assembling of parts. As an organization in charge of overall safety issues including environmental and accident prevention control, the Committee has provided training on environmental issues and patrolled the cooperating companies. Last year, we conducted training of executive officers and supervisors separately on the theme of Anritsu's environmental efforts and the issue of chemical substances and the environment. Also in June and October, we patrolled our cooperating companies to check their management of chemical substances, energy saving, and the progress of their waste reduction activities.

Environmental Newsletter

Disclosure of Information

Environmental homepage on the Internet

We have set up an environmental information corner on Anritsu's homepage, giving various information including the history of our environmental management, status of ISO1400 certificate acquisition, Anritsu Eco products, and our Environmental Report. There is also an inquiry section for submitting opinions and requests.



Homepage on environmental issues

Publication of Environmental Management Report

As one of the methods of disclosing information on the environment, we started issuing this environmental report in 2000. In September last year, we published Environmental Report 2001, which explained environmental accounting and the environmental efforts of our affiliated companies. We will expand the scope and contents of the report.

Environmental Report

(2000 version)

(2001 version)

Environmental information activities

We actively publish and advertise our latest environmental management activities such as production of environmentally conscious products and our efforts toward zero emission. In fiscal 2001, three reports on our activities were published in newspapers and magazines. We organized Anritsu's exclusive exhibition "Core Tec 2001" both in Tokyo and Osaka and exhibited panels on environmental issues and our Eco products.

Panel exhibition (efforts toward environmental issues)

Panel exhibition (products)

Article on Nikkei Ecology

Contribution to the Local Community

Contribution to the local community

Our Atsugi Works employees actively participate in community activities such as The Sagami River Clean Campaign and Clean Atsugi Campaign, thus building links with the community. They also organize campaigns for cleaning the environment of the Works in partnership with the labor union. The employees of our affiliated companies also participate actively in volunteer activities of the community on their own initiative.

The Sagami River Clean Campaign

Onomichi Anritsu City Cleaning

Nature tour guide of Tohoku Anritsu

Review of Our Environment Management Activities

2000

2001 Decommissioned the boilers for heating in the Head Office.
Expanded the scope of ISO14001 accreditation to include the Head Office.
2000 Acquired ISO14001 certification for Anritsu Limited (U.K.).
Established Anritsu Eco Product system.
Constructed Recycling Center.

1990

1999 Compiled "Anritsu Green Procurement Guideline - for product development."
Acquired ISO14001 certification for Tohoku Anritsu.
1998 Acquired ISO14001 certification for Atsugi Works.
Received commendation from the Manager of the Kanto International Trade and Industry Bureau as an excellent 'greened' factory.
Organized the Environmental Engineering Group in the Technology Division.
Organized the Lead-free Soldering Committee.
1997 Started moves to receive ISO14001 accreditation.
Promulgated Anritsu's environmental policy.
1996 Joined the greenery purchase network.
Compiled the Anritsu Environment Manual.
Decommissioned the facilities specified in the Air Pollution Prevention Law (kerosene boilers) at Atsugi Works.
1995 Started mutual examinations with the Environmental Affairs Council for Associated Companies of NEC.
Received the Atsugi Area Waste Handling Council Chairman's Award.
1994 Reorganized the ZP Committee at Atsugi Works into the Product Assessment Committee.
Organized the Product Assessment Committee.
1993 Withdrew all ozone-depleting substances (except refrigerants and fire extinguishing chemicals).
Organized the Environment Management Committee (present Environment System Committee).
Organized the Environment Management Department.
Made adjustments for compliance with the statutory nickel-cadmium regulations.
Introduced an environmental principle and environment management system provisions.
Investigated hard-to-burn bromic substances and disposal methods.
Organized the Energy Committee.
1992 Organized environment preservation design and investigation working groups.
1991 Received the Japan Greening Center President's Award.
1990 Started centralized purchase and distribution of chemicals.
Organized the Environment Management Section within the General Affairs Department at Atsugi Works.

1980

1989 Organized the Committee for Reduction of Specified Substances.
1987 Constructed elevated process pipes at Atsugi Works.
1981 Received an Excellent Environment Preservation Award from the Kanagawa Prefecture Central Area Administration Center.
1980 Commended as a model 'greened factory' in Kanagawa Prefecture.

1970

1979 Commended by the Kanagawa Prefecture Environment Preservation Council as an excellent environment preservation factory.
1978 Connected discharged water other than rain water to the public sewage system.
1974 Introduced an activated sludge processing facility as the kitchen drain water processing facility.
1972 Expanded the drain water processing facility at Atsugi Works.
1970 Organized the Zero Pollution (ZP) Committee.

1960

1962 Constructed the wastewater treatment facility following the opening of a chemical engineering plant at Atsugi Works.

ANRITSU CORPORATION

ANRITSU CORPORATION
5-10-27 Minami Azabu, Minato-ku, Tokyo 106-8570, Japan http://www.anritsu.co.jp/
Contact: Environmental Promotion Center Tel: +81-46-296-6503 Fax: +81-46-225-8301
E-mail: ecoinfo@zy.anritsu.co.jp

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