

# Environment Report 2011



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## Union Tool Co.

President & CEO Takao KATAYAMA

Union Tool Co. celebrated its 50<sup>th</sup> anniversary in December 2010.  
I would like to take this opportunity to thank all of you for your continuous support to us.

The current changing business environment does not allow us to be optimistic. However, we took various kinds of initiatives to cope with the global recession, said to be “the worst in the century”, 2 years ago. “ULF Coat Drill” is one of the results of such efforts. It is a drill designed for substrate which we improved chip evacuation and product life with new material and coating.

We also focus on products targeting new fields after our main product, PCB drills. We are going to expand our business to die machining, car industry, aviation industry, etc. by developing and providing carbide end mill for shape forming, and rolling dies for efficiency improvement of precise screw processing.

It is our on-going commitment not only improving product capacity but also providing user-friendly and eco-friendly products. We believe that maximizing our technological strength in our product is a basic act as a manufacturer, so that we devote ourselves to our job at Union Tool. To find problems from the customers' point of view and try to find all possible solutions will strengthen our reliability and increase value for our customers.

Since the foundation of the company, Union Tool has dedicated itself to support manufacturers by providing qualified tools. Bearing in mind our basic philosophy, we would like to ensure sustainable development of the society through the strong commitment to the social contribution.

This is our 11<sup>th</sup> issue of “Environmental Report.” I hope this “Environment Report” will help you understand our corporate efforts. It is also highly appreciated if you could give us any feedback/input to us.

April 2011

# Company Profile

## Basic information

Name : Union Tool Co.  
 Head Office : 4-15-8 Minami-Ohi, Shinagawa-ku  
 Tokyo 140-0013  
 TEL 03-5493-1001  
 FAX 03-5493-1002  
 Capital : 2998.5 million yen  
 Fiscal term : November 30  
 Number of Employee : 766 (as of November 2010)  
 Group-wide : 1,438  
 Average Age : 36.0  
 Factory : Nagaoka Factory (Nagaoka-city, Niigata)  
 Mitsuke Factory (Mitsuke-city, Niigata)  
 Laboratory : Mishima Laboratory(Shuntogun, Shizuoka)  
 Sales Office : Osaka Office  
 Nagaoka Office  
 Nagoya Office  
 Anjo Office  
 Kitakanto Office

## Business:

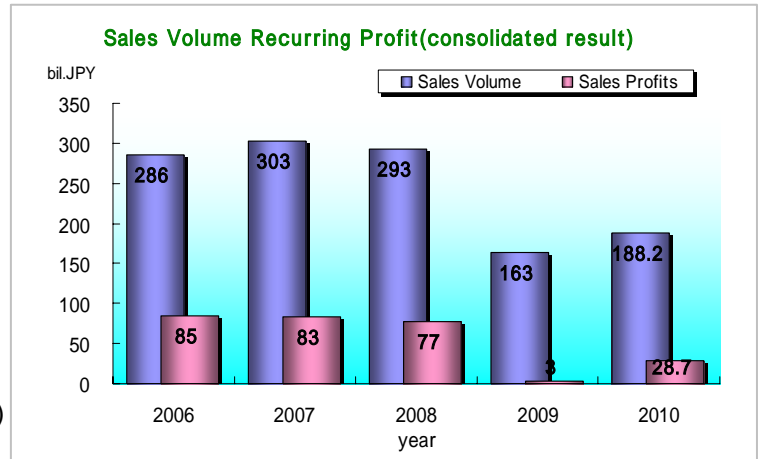
Cutting Tool Division  
 PCB Drills, Carbide End Mills  
 Other Divisions  
 Linear Motion Guides, Designated Machine,  
 Measuring Instruments, Rolling Machine

Nagaoka Factory: Acquired ISO 14001 certificate in March 2000  
 Mitsuke Factory: Expanded the area of ISO 14001 certificate in August 2007

## Subsidiaries

It is certain that the market will expand globally as a development of an information-oriented society. Union Tool has promptly begun to correspond to the market trend and have set up 8 subsidiaries abroad for production and sales. At the same time, we have expanded local factories or R&D facilities to further strengthen our global network. Among 3 production sites, we have acquired ISO 14001 certificate at Dongguan Union Tool Ltd. and Union Tool (Shanghai). We ensure that our business activities always be eco-friendly.

TAIWAN UNION TOOL Corp.  
 U.S. UNION TOOL, INC  
 UNION TOOL EUROPE S.A.  
 UNION TOOL (Shanghai) Co., Ltd. ISO14001 Certified  
 UNION TOOL (Waigaogiao Shanghai) Co., Ltd.  
 UNION TOOL HONG KONG LTD.  
 UNION TOOL SINGAPORE LTD.  
 DONGGUAN UNION TOOL LTD. ISO14001 Certified



# Greetings from the Executive Director

Environment related key words such as “Global Warming”, “Eco-policy”, “Biodiversity”, and “Restriction of Chemicals” are often seen in various documents or conversations on daily basis. Any kind of information can be taken from various kinds of media, however, we need to assess its credibility and effectiveness. I believe that it is critical and essential to increase individual and organizational capability to gain added value to the company.

Union Tool has been conducting ecological education since 2000 mainly at our Nagaoka factory, which acquired ISO 14001 certificate in that year. We believe that we could further promote one step ahead ecological activities by improving each employee’s skill and different perspectives. While addressing the global environmental issue, we will continue to focus on issue which could be tackled by the individual level so that we could elevate their level of ecological consciousness.



This report will present various programs activities on what we are conducting in our factory. We would appreciate if you could read it and give us any comments for mutual communication as well as for our future environmental activities.

April 2011

**Union Tool Co.**

Executive Director, Hideo TAGUCHI

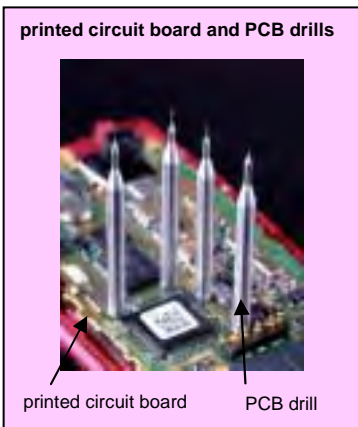
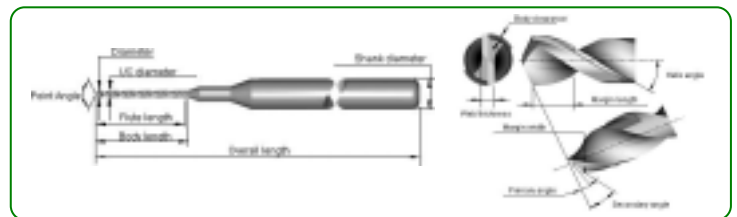
## Products

Electrical devices, such as TV, PC, or mobile phone, contain various kinds of electrical components. There is PCB (printed circuit board) inside which mounts wide variety of electrical components. PCB electrically connects these electrical components and requires conduction hole as a path for electricity. PCB drill is a tool to create conduction holes.

Due to the size reduction and capability improvement of electrical devices, conduction hole becomes smaller and smaller in diameters year after year. Majority of demand requires less than 0.25mm diameter, there is even a need for a drill which is finer than human hair.

It is quite essential for a cutting tool to be able to “cut well” and “last long”, however, it is also very important for our customer that our tool can create a linear hall (precise hole making)”

Smaller diameter drill requires higher level of quality control. There are number of points to be checked as shown in the chart at the right side.



## Other Products



Carbide End Mills  
UNIMAX Series



Dies



Linear Motion Guide



## Union Tool Co. Environment Policy

### Basic Philosophy

To contribute to the rich global environment through the corporate activities of loving nature and human beings

### Basic Principle

Nagaoka Factory and Mitsuke Factory (Hereinafter "Our factory") will maintain a harmony with corporate activity, neighborhood and global environment by developing Environment Management System based on ISO 14001 Standard and conducting ecological activities based on following policies.

- 1 . Accurately grasp the impacts of activities of this factory, products and services and conduct environment protection activities by developing purposes and goals within our technical and economical capabilities.
- 2 . Continue to improve Environment Management System and Ecological Performance with the periodic review of their environmental purposes and goals.
- 3 . Comply with environmental laws, regulations, rules and further develop our own criteria within our capabilities and prevent pollution.
- 4 . Following will be the main theme in activities of this factory as well as in impacts of our products and service toward environment.
  - 1 ) Promote energy saving
  - 2 ) Promote Green procurement
  - 3 ) Promote Recycling
  - 4 ) Promote resource saving
- 5 . Environment Policy will be conducted and maintained by Environment Management System and also will be notified to all staff at this factory by the Corporate Management.
- 6 . Environment Policy will be open to public.


April 1, 2009  
Union Tool Co.  
Executive Director,  
Hideo TAGUCHI

We have created, at our factory, "Basic Philosophy" and "Basic Policy" as Environmental Policy in August 1999 based on the corporate culture of "to love nature, people and work."

This policy was revised in April 2009, and we will conduct various measures based on this revised policy in 2011.

# Environmental Burden along with Business

For effective environmental burden reduction activities, we are trying to monitor all environmental burden along with business activities from INPUT to OUTPUT phases.  
 Regarding the energy consumption in INPUT phase, we focus on electricity, where 90% of CO<sub>2</sub> emission occurs, and promote aggressive energy saving activities to reduce CO<sub>2</sub> emission.  
 Thanks to our customers' cooperation, we also collect and recycle drill cases, shipped with the products, which made a big contribution to our resource saving programs.

	Nagaoka Factory	Mitsuke Factory	
<b>INPUT</b>	Electricity (1000kWh)	12,515	2,493
	Kerosene (L)	10,000	
	LPG (m <sup>3</sup> )	2,053	
	City Gas (1000m <sup>3</sup> )		120.6
	Tap Water (1000m <sup>3</sup> )	35.2	9.7
	Ground Water (1000m <sup>3</sup> )	1,054.3	37.6
	Raw Material (t)	292.3	11.1
<b>【Nagaoka Factory · Mitsuke Factory】</b>			
 <b>UNION TOOL CO.</b> Cutting Tool manufacturing ( Drills, Router, End Mills ) Linear Motion Guide Manufacturing			
<b>OUTPUT</b>	CO <sub>2</sub> Emission (t-co <sub>2</sub> )	5,888.2	1,418.4
	Discharge into sewers (1000m <sup>3</sup> )	37.6	9.4
	Discharge into rivers (1000m <sup>3</sup> )	1,052.0	38.0
	Industrial Wastes (t)	320.9	89.0
	Volume of Sales (t)	376.6	9.8
<b>RECYCLE</b>	10P Drill Case Recycling rate (%)	19.8	
	50P Drill Case Recycling rate (%)	52.9	
	200P Drill Case Recycling rate (%)	62.2	

The calculation of above period was Dec. '09 to Nov.'10  
 1 CO<sub>2</sub> emission : based on "Enforcement Regulation of Act on the Rational Use of Energy"  
 2 Amount of industrial wastes : "Report on Industrial Waste Management Slip and Diffusion of Electrical Manifest" ( 環廃産#061227006 )  
 ( weight calculation ) based on: addendum2 "conversion factor of industrial waste from cubic volume to weight" ( reference )

# 2010 Target & Achievements

In 2010, we have set a target and action plans based on the environmental policy of Energy Saving, Green Procurement, Recycling, Resource Saving, as well as waste water issue which we have been addressing from 2009.

Regarding the Energy saving, we set up a mid-term objective of reducing 5% of electricity use in the production unit and set up a systematic measure. However, we could not reach the target of 2010 at Nagaoka Factory.

As for the development of eco-friendly tool, we successfully introduced a new bonding drill which contains far less hard metals including rare metal. We would like to expand the application of this technology to further improve resource saving.

For details, please refer the following chart:

## 2010 Target & Achievements

Item	Actions	2010 Target	2010 Achievement	Eval uatio	Ref. Page
Energy Saving	Promote reduction of electricity use	Cut 1% of electrical power consumption rate from that of 2009 *1 [Nagaoka Factory]	Plus 6.6% of electrical power consumption rate from that of 2009 *1	D	7
		Cut 1% of electrical power consumption rate from that of 2009 *2 [Mitsuke Factory]	Cut 8.9% of electrical power consumption rate from that of 2009 *2	A	7
Green Procurement	Establish Green Procurement System · Develop & Review Green Procurement System	100% registered product "toxic substance inclusion level	100% registered product "toxic substance inclusion level	A	8
Recycling	Recycling of Drill Cases · PR activities to promote collection from our customers · Research of issue, on collection and its solution	10P Recycle Case usage rate: 19%	10P Recycle Case usage rate: 19.8%	B	8
		50P Recycle Case usage rate: 79%	50P Recycle Case usage rate: 52.9%	D	8
		200P Recycle Case usage rate: 46%	200P Recycle Case usage rate: 62.2%	A	8
	Raise recycling rate of drill cases in overseas · Monitor collection rate · Research of issue, and its solution	Collection of DC 50P case from Korea: 60%	Collection of DC 50P case from Korea: 35%	D	8
	Case recycle at overseas subsidiaries · Improve case recycling rate · Support recycling activities	Add one client to be collected	Add one client	B	8
Resource Saving	Improve duration of tools	Development of longer life tool(including the improvement of existing	Development & improvement completed.	B	9
	Development of eco-friendly drills	Development of eco-friendly drill: 1 case	Development completed	A	9
	Develop resource saving manufacturing facilities	Develop and improve Process collection facilities: 2 cases	Development of Process collection facilities completed, partially under	C	9
Waste Water	Reduction of pollution substance from specific source	Reduce 5% of pollution substance concentration compared with that of 2009	Reduce 19% of pollution substance concentration compared with that of 2009	A	-

A : Exceeds the Target    B : Achieve the Target    C : Not satisfactory    D : Totally Failed

1 : For calculation of 2009 criteria figure, we used 2009 Apr-Nov actual figure

Production Unit Electric Consumption ( kwh/thousand ) "÷"Electric Consumption ( kwh ) "÷"# of production of cutting tools ( thousand )

2 : For calculation of 2009 criteria figure, we used 2009 Jun-Nov actual figure

"production unit energy consumption(L/#)" = "oil converted energy usage(l)" ÷ "# of production of cutting tools"

# Efforts for Energy Saving

In 2010, we set an objective of cutting 1% of electricity use in the production unit from that of 2009\*<sup>1</sup> and conducted various energy saving activities. However, we have seen 6.6% increase of electricity use in the production unit at Nagaoka Factory. At Mitsuke Factory, we could achieve 8.9% reduction of electricity use in the production unit from that of 2009\*<sup>2</sup>

We have set a new mid-term objective in 2010\*<sup>1\*2</sup> and have taken various energy saving activities.

One of the actions we took in 2010 was to switch old 30 Mercury lamps to more efficient ones. We will continue this measure in 2011 as well. We have also introduced inverter to lighting facility few years ago. We changed each buildings iron-core stabilizer to inverter. We have completed what we planned for 2010 including switching of 400 stabilizers.

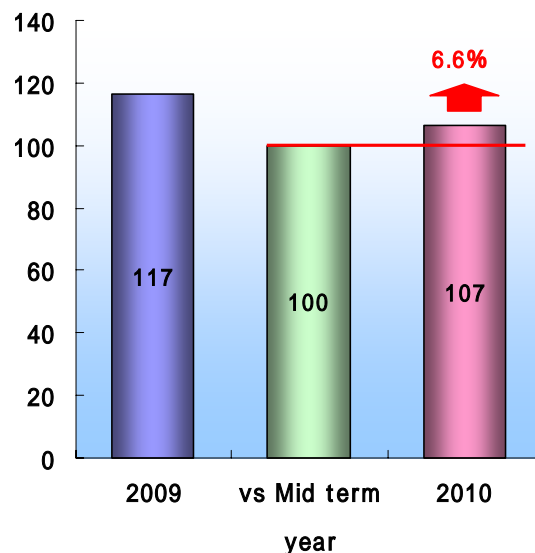
We also reviewed number of compressor operated. We reduced the number of compressor operation when we experienced a significant decrease of production amount in the past. However, as we continued the optimization of the production shift or layout change in order to pursue efficient operation of compressor, we could further reduce the number.

In 2011, we will actively introduce more efficient facilities such as replacing 11kw type pump to 7.5kw type. We also plan to improve our air conditioning facility for energy saving.

\*1:The 2009 figure used for the criteria of Nagaoka Factory mid-term objective was based on the actual figure between Apr.-Nov. 2009.

\*2:The 2009 figure used for the criteria of Mitsuke Factory mid-term objective was based on the actual figure between Jun.-Nov. 2009

Comparison of electricity use in the production unit('09-'10):Nagaoka Factory



# Ecological Education

Our eco-management department provide ecological education. According to the employee's nature of the job, there are 4 types of trainings; epecialized course, basic course, general course, and induction program for new comers, to increase ecological knowledge necessary in various job responsibilities. One of the training sessions in general course is "Enhansing environmental awareness training" has been conducted once a year for all factory staff since June 2000.

In 2010, we raised hot topic like "Biodiversity" or more familiar topic like "Basic knowledge and operation method of air conditioning facility of the company". In "Biodiversity" training, we taught the conceptual framework as well as the way manufacturing industry to face the issue so that our staff become familiar with the topic. In " Basic knowledge and operation method of air conditioning facility of the company" training, we invited the staff from energy devision as an animator. We first taught the amount of energy consumption of the company, and then taught the way to set the temparature as well as the method of cleaning and maintainance.

At the end of each training session, we always ask questions to the participants to make sure everybody understood the content of the training.

## Training Theme in the past

- Environmental Objective, Target
- Biodiversity
- Chemicals used in the company
- Basic knowledge and operation method of air conditioning facility
- Environment, and Safety Concerning cars
- Environmental Report
- Environmental Label



Training Materials



Class room

# Green Procurement

Bearing in mind the expansion of chemical restrictions in the world, we took it as our customers' new requirement on top of product capacity and quality. Thus in 2008, we established a procurement system of non-toxic substance, trying to make green procurement as a daily routine by continuously checking toxic substances.

With the support and understanding of our business partners, we will reinforce green procurement to deliver eco-friendly and safe products while reducing environmental burden.

Green Procurement Guideline



# Recycling

We collect drills and drill cases for the purpose of resource saving and waste reduction which contribute to the reduction of environmental burden. Especially, we put our special attention to drill case collection and recycling as our company wide objective.

Reuse of Drill Cases details shown in the graph below

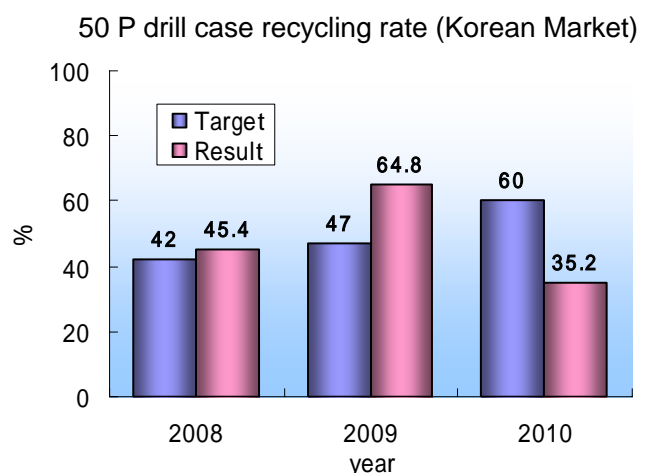
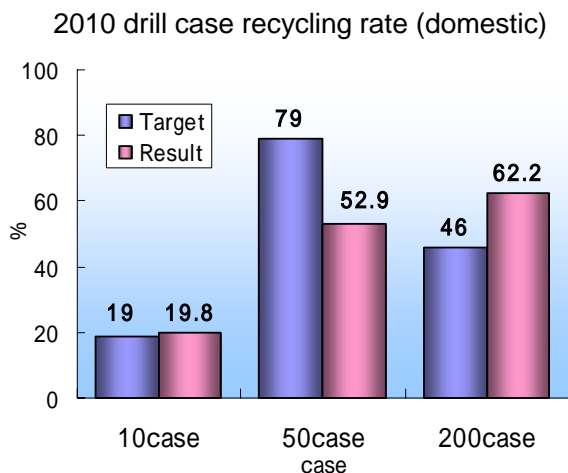
We monitor and control drill case recycling rate by type for all shipped out cases from Nagaoka Factory. In 2010, we could not achieve the target for 50P case. There are many factors which affect case recycling rate, such as, number of production, volume of collection, condition of collected cases. One of the factors of non-achievement of 50P case collection rate target was that we could not secure sufficient number of case to be recycled due to slower growth of collection rate from Korean market.

Improvement of Drill Case Collection Rate outside of Japan details shown in the graph below

Although we promote collection activities by listening to our customer's voice, we could not achieve the continuous improvement of collection rate this year like. Comparing with the domestic market, we have not been able to thoroughly implement the collection activity outside of Japan.

Expand Case Recycling Activity to Overseas Subsidiary

One more customer of Union Tool Singapore has agreed to cooperate with our case collection.



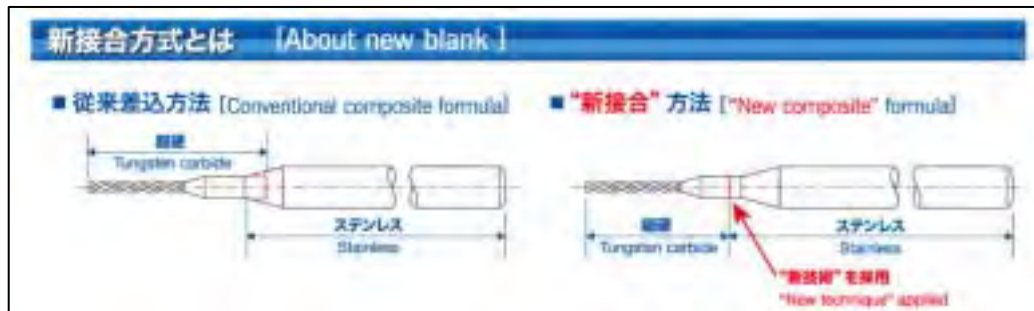
Usage rate of recycled case = number of usage of recycled case/number of operations(packaging)

Recycling rate in the Korean Market=number of collected/number of shipment

...the period from shipment until collection is not always the same, therefore, the recycling rate may exceed 100%.

## New Composite Formula Drill

The cutting edge of PCB drill is made from rare hard metal. Recently, we often hear about rare metal issue, however, our company reduced the usage of rare metal while maintaining the quality and performance of the product. In the past, we used conventional composite formula to joint drill made of stainless and body made of tungsten carbide. The new composite formula directly joints surface of two materials. Therefore, we could reduce the inserted carbide portion. Due to non-existence of adhesive layer, it could contribute to the resource saving as well as recyclability. PCB drill with this new formula will be applied to different sizes so that we could further contribute to resource saving.



## Tool contributes to energy /resource saving

Attached is the article in the magazine "Machine & Tool" March 2010 edition (published by Kogyo Chosa Kai Co).

We are providing high efficiency twin blade ball end mill HSB, HSLB, which could realize "ECO processing".

This product enables higher efficiency and longer life processing. It also contributes to energy saving and resource saving by significantly shortening the processing time and by processing more with one tool.

Tool is not just a thing to process. By giving additional value with unique technology, it could contribute to the reduction of cost and environmental burden at the customers' place.

For details, please refer to the technological information in our company website.



# Topics

## Presenting our Report at Environmental Report Forum

On February 28, 2011, there was an Environmental Report Forum organized by Niigata Prefecture, at Tsubame-sanjo Industrial Center, where Union Tool participated.

We were one of the companies who presented the report, and it was a good opportunity for Union Tool to let many people know about our environmental activities.

There were about 60 people from the government, various organizations, or companies and we received many comments and questions after the presentation.

We learned about the way people perceive, and received questions about the evaluation method of activity or layout. We also received positive comments on our mecenat and CSR activities. It was a precious learning experience for us.

We could reflect some of the comments from the forum in this report.



2010 Environmental Report Forum

## Clean Campaign

We conducted clean campaign at Nagaoka and Mitsuke Factories twice a year under the initiative of employee circle so that neighbors and our staff could enjoy the clean environment. In 2010, we conducted with total of 200 employee and their family members in May and September.

Thanks to the good weather, participants could clear garbage or fallen cherry blossom petals.

We will continue to contribute to environment protection of the neighborhood through the cleaning activities like this.



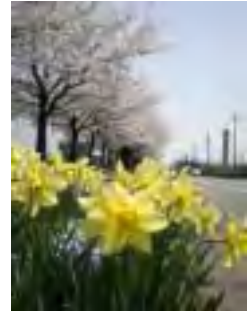
Sweeping flower petals, picking weeds from the flower pot



Photo taken with mowed grass



At Mitsuke Factory, we expanded the area of cleaning beyond the surrounding road



Daffodils planted few years ago are full in bloom



Mowed grass on the truck



Campaign Participants at Mitsuke Factory



Campaign Participants at Nagaoka Factory

## Ikuyo Nakamichi Piano Recital

Since 2002, our company has organized piano recital in Nagaoka City of Niigata where we have our main factory as part of mecenat activity. Inviting Ms. Ikuyo Nakamichi, officially sponsored by Union Tool, we held "Union Tool Classic Program" every year.

The 2010 program at Nagaoka Lylic Hall was "Ikuyo Nakamichi Chopin Piano Concerto chamber music version" as centennial celebration for Chopin and created 19<sup>th</sup> century salon atmosphere. The audience could enjoy the sensitive harmony of piano and strings different from that of orchestra.

The piano recital of Ikuyo Nakamichi is also held in Tokyo. We would like to show our gratitude for those who are supporting us.



Nagaoka recital poster



Tokyo recital poster

### 【Voice from the Nagaoka Factory Staff】

I was very happy to be able to listen to the performance by a famous pianist in my home town. Every year, I enjoy it with my family and friends.

Voice



Ikuyo Nakamichi Official HP: <http://www.ikuyo-nakamichi.com/>  
Nagaoka Lylic hall HP: <http://www.nagaoka-caf.or.jp/>

## Support for Academic Activities

~ For Japan's bright future and development of science and technology ~

We have established a scholarship program to develop high potential personnel. It is for science and engineering major students in Niigata, where Nagaoka Factory exists. We also run "Science & Technology Research Grant System" for university laboratories etc. in Niigata to support research activities of advanced technologies.

We would like to contribute to the promotion of science & technology as well as the industrial development in Niigata Prefecture.

## Illumination

Every Christmas season, Nagaoka Factory puts illuminations. It originally started for employee welfare, however it also became very popular among neighbors. It is our 16th illumination and is still designed and implemented by our staff.

The light tree, which appears in the center of illumination every year, was illuminated with LED lamp in 2010. It looks even more magical while saving energy.



Nagaoka Factory Illumination with 20,000 lamps

## Other Activity

We actively conduct various activities on daily basis to contribute to the environment and society.

### • Idling Stop

We are promoting eco-driving to prevent air pollution or reduce CO<sub>2</sub> emission from the car. We put idling stop stickers to all the company cars at Head Office as well as each office to claim our campaign as well as to draw other drivers' attention inside/outside the company.



Idling Stop Stickers

### • Collection of Used Stamps

We have been collecting used stamps not only at our factories but all the offices and send them to "The Defence of Green Earth Foundation (DGEF)" to support their green protection/regrowth. Those stamps are sold to the collectors and the money is sent to forestation activity.

We sent about 1.3Kg (9,500 sheets) used stamps, telephone cards and post cards.

based on our measurement conversion criteria of used stamps



Collected Stamps and Our Staff

### • Pet Bottle Cap Collection

We collect the caps of used pet bottles. Through NPO, caps will be changed into vaccines. 800 pet bottle caps are equivalent to vaccine for one child.

We first started the collection at Tokyo Office and then now it is expanded to Nagaoka, Mitsuke Factory and Mishima Laboratory. In 2010, we collected about 440 thousand caps, which is equivalent to polio vaccine for 54.9 people.



Pet Bottle Cap Recycling Box

# Future Efforts

Among 2011 Objectives and Targets, in the area of energy saving, we will try to follow a new mid-term objective set in 2010, which is to reduce 5% of electricity (energy) use in the consumption unit within the next five years at each factory.

In the area of resource saving, we try not only to develop products with longer life with usage of less resource, but also to develop and improve our self-developed machine with higher efficiency.

## 2011 Environment Purpose and Objective

Item	Actions	2011 Target
Energy Saving	Cut 5% of electrical power in production unit* <sup>1</sup> by 2014 from '09 result * 【Nagaoka Factory】	Cut 1% of electrical power consumption rate from that of 2010
	Cut 5% of electrical power in production unit* <sup>2</sup> by 2014 from '09 result * 【Mitsuke Factory】	Cut 1% of electrical power consumption rate from that of 2010
Recycling	By year 2011, Drill Case usage rate 10P Case 45% 50P Case 80% 200P Case 65%	10P Recycled case usage rate 45%
		50P Recycled case usage rate 80%
		200P Recycled case usage rate 65%
	Promote Case Recycling at overseas subsidiaries	Establish new collection route for DC50P case
Resource Saving	Improve duration of tools	Develop longer life tool 6 cases (including improvement of existing product)
	Development of eco-friendly drills	Develop resource saving tool 1 case
	Reduce rare metal usage	Develop/improve resource saving tool manufacturing facility: 1 case
	Reduce industrial waste	Develop/improve longer life tool manufacturing facility: 1 case
Waste Water	By 2011, reduce the level of concentration of pollution substance	Reduce 5% of pollution substance from that of 2010

\*<sup>1</sup>: Production Unit Electric Consumption ( kwh/thousand ) "÷"Electric Consumption ( kwh ) "÷"# of production of cutting tools ( thousand )

\*<sup>2</sup>:"production unit energy consumption(L/#)" = "oil converted energy usage(l)"÷"# of production of cutting tools"

\*For calculation of 2009 criteria figure, we used 2009 Apr-Nov actual figure for Nagaoka Factory, and 2009 Jun-Nov actual figure for Mitsuke Factory

# Environmental Accounting

## 2010 Environmental Accounting Result

- Scope : Union Tool Co., Ltd. Nagaoka Factory, Mitsuke Factory
- Period : 2010 fiscal year ( Dec 2009 to Nov. 2010 )

### Environment Protection Cost

( million Yen )

Category		Investment	Cost	Major activities & effects
Cost within business area	Prevention of Pollution Cost	0.2	0.5	Prevention of Water Pollution, Air Pollution, Noise and Fluctuation
	Protection of Global Environment Cost	1.4	0.0	Energy Saving Activities(Cut Electricity
	Resource Recycling Cost	0.0	14.9	Recycling Processing, Waste Processing, Waste Reduction Programs
Early/Final Process Cost		0.0	53.5	Collection/Recycling of Drills and Drill Cases
Control Activity Cost		0.1	3.6	Monitor Environmental Burden, ISO14001 operation
TOTAL		1.7	72.6	
		74.3		

Amount of Investment is fully depreciated within the investment year because of its difficulties in calculating period for investment effect to become visible(Also we do not include purchase amount for components at the time of introducing self-developed manufacturing facilities)

### Economic Effect of Environment Prevention Activities - substantial effect -

( million yen )

Item	Amount	Major activities & effects
Profit	15.5	Sales Profit of assets produced by recycling
Cost Saving	37.7	Reduction of amount of use of electricity, tap water. Reduction of wastes, reduction of purchase cost of New Case as a result of Case Recycling, etc
TOTAL	53.2	

## Contacts



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Issue Date April 2011  
Next Issue April 2012



\*This report is mainly based on date of year 2010(December 2009~November 2010)  
\*Part of the figures are the total of Nagaoka Factory and Mitsuke Factory. Part of this report contains information after December 2010