

Forest-In Office

Amada Green Action

**Amada Group
Environmental and Social Report**



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◆Our Management Philosophy

1. Grow with our customers

Our company has been sharing this philosophy as a starting point for all of our business activities since its formation.

We believe that the creation and provision of new values based on customers' perspectives will strengthen the relationship of mutual trust between our customers and the Amada Group, and become a source of mutual development.

2. Contribute to the international community through our business

Our company recognizes that contributing to "manufacturing" conducted by our customers throughout the world leads to the development not only of local communities, but also the international community as a whole, and we conduct our business activities with the aim of providing the highest quality of solutions in each market around the world by optimally distributing our group's management resources.

3. Develop human resources who pursue creative and challenging activities

Rather than being content with the present situation, we are constantly in search of new and better ideas to put into action in order to improve and enhance our business activities. This is the Amada Group's basic philosophy of human resource development, and we believe that Amada's unique corporate culture will be further developed by continuing to practice this philosophy.

4. Conduct sound corporate activities based on high ethics and fairness

We promote transparency and we comply with regulations in the Amada Group's management and in all aspects of its business activities, and strive to further enhance its corporate value while conducting sound activities.

5. Take good care of people and the earth's environment

By treating the Amada Group's stakeholders (such as shareholders, customers, business partners, employees and local residents) and the global environment with respect, we strive to continue to be a good company for both people and the earth.

◆Amada Group environmental policy

◇Amada Group's environmental principles

Amada Group thinks that preservation of the earth, a small planet in macrocosmos, for the next generation is the biggest theme for human beings. Based on this idea, Amada Group positions environmental preservation as one of its important management issues, and is committed to contributing to a prosperous future for people around the world through eco-friendly manufacturing, in order to pass down this beautiful earth to our descendants.

◇Amada Group's environmental policies

1. Provision of products and services for preservation of the environment

Evaluate environmental load throughout the product life cycle, provide energy-saving and resource-saving products and services which are free of hazardous substances, and contribute to environmental preservation and the economy.

2. Reduction of environmental load in business activities

In every process of business activities, thoroughly pursue reduction of environmental load by promoting energy efficiency improvements, energy saving, resource saving and recycling. Also, aggressively promote green procurement and try to eliminate the use of hazardous substances.

3. Biodiversity activities

Grasp effects of business activities on the natural environment and contribute to building a biodiversity-nurturing society in concert with stakeholders.

4. Compliance with environment-related laws

Comply with environment-related laws and other agreements concluded with stake holders.

5. Continuous improvement of environment management system

Build an environment management system and make continuous improvement of it. Grasp the effects of business activities, products and services on the environment. Set environmental goals and targets and reduce environmental load as well as prevent contamination.

6. Enhancement of education about environment

Provide education aimed at environment preservation to improve employees' sense of responsibility as a member of the company and also boost awareness of environment preservation.

Established in April, 2010
Mitsuo Okamoto
President of Amada Co., Ltd.

Message from the President and CEO



Although the US economy continued to grow at a slow pace, negative factors such as Europe's long-term debt problem and a growth slowdown in China and other emerging country markets led to a generally faltering world economy in fiscal 2012. As for the Japanese economy, the outlook brightened in the latter half of the fiscal year as demand driven by reconstruction after the Great East Japan Earthquake remained strong, while expectations of anti-deflationary economic policies in the wake of the change of government led a falling yen and rising stock prices. Henceforth, a slow tendency to recovery seems likely to continue, but exchange rate fluctuations and the economic situation in Europe, China and other areas of the world will pose unpredictable risks.

Meanwhile, a shift of production to emerging countries, environmental protection measures and the advent of revolutionary products and technologies are driving major transformations in manufacturing sites the world over. We have been swift to respond to this trend and changes in the economic situation, and we are making steady progress as we continue to follow a strategy of growth for the whole Amada group.

However, bearing in mind that the foundation of our business activities is the stability of the global environment and the development of society, we are fully aware that, even in this difficult economic situation, a company is a public entity that benefits society, and that we have a duty to fulfill our social responsibilities as our various stakeholders expect us to.

In 2010, we formulated the *Amada Group Environmental Declaration*, in which we stated our intention as a company to connect with our customers, society and the world through eco-conscious manufacturing. In line with the long term "Amada Green Action" targets for 2020, we have committed ourselves to three major tasks.

— Reducing CO₂ emissions associated with our products—

Our first task is reducing CO₂ emissions associated with our products. Since the Amada Group's products are industrial goods, most of their CO₂ emissions occur in the customer use stage of their life cycles. This is why we believe that developing machines with good energy-saving performance (ECO PRODUCTS) is so important. The fiber laser oscillator, which we were the first manufacturer in the world to develop, is an example of such products, offering significant energy savings in comparison with conventional oscillators. Consuming 80% less power than conventional models, metalworking machines equipped with this oscillator require no laser gas and achieve low running costs. We are proud to contribute to a low-carbon society by supplying numerous customers with these outstandingly energy-efficient machines. Thanks to our customers who used the 10 kinds of ECO PRODUCTS developed by Amada in the three years to 2012, we were able to achieve a 6.6% emissions reduction in fiscal 2012, putting us well on the way to meeting our target of a 25% reduction by 2020 concerning emissions associated with our products. In the future, we shall be focusing our efforts on improving energy efficiency, developing energy- and resource-saving technologies, and reducing CO₂ emissions from all our products.

— Reducing CO₂ emissions associated with our business activities—

Our second task is reducing CO₂ emissions associated with our business activities. Believing that ECO PRODUCTS with great environmental performance are manufactured in energy- and resource-saving eco factories with high production efficiency, we have been streamlining our business processes and promoting the saving of energy and resources.

Also, we believe that the practical use of natural energy is going to become increasingly important, so we are running our new plants at Toki and Ono, which opened in November 2011, on natural energy sources. Making maximum use of natural energy, Toki Works is a particularly environmentally friendly facility, and its new Technical Center is the first zero-carbon building in the Chubu area. Thanks to such projects, we were able to achieve a 5.3% emissions reduction in fiscal 2012, putting us well on the way to meeting our target of a 25% reduction associated with our business activities, by 2020. We shall continue to use natural energy in our efforts to decrease CO₂ emissions and contribute to a sustainable society.

— Conservation and regeneration of biodiversity—

Our third task is the conservation and regeneration of biodiversity. Our main site of Fujinomiya Works lies in a region of extensive woodlands, and we have conducted tree thinning and planting in the woods on the grounds of the facility as part of a plan to create a rich ecosystem in this area, which we have named the Amada Forest. Last year, an environmental baseline survey confirmed the presence here of lady's slipper and calanthe, which are designated endangered species in Shizuoka Prefecture. Seeking to conserve and regenerate biodiversity, we shall be paying special attention to the protection of these endangered species as work to create the Amada Forest continues.

In the future, as a comprehensive manufacturer of metalworking machinery, we shall continue to respond to the expectations of our customers and other stakeholders through our manufacturing, thus fulfilling our corporate social responsibilities and contributing to a prosperous future for the world's people.

September 2013



Introduction

About Amada

Amada is a comprehensive manufacturer of metalworking machinery, a “total solution” company that contributes to the creation of products for global customers.

This is Amada

The Amada Group consists of approximately 90 subsidiaries and affiliated companies, and its main business is the manufacturing, sale, leasing, repair, maintenance, inspection, and testing of metalworking machines and equipment.

It handles metalworking machines mainly for the four business fields of sheet metal machines, presses, cutting /structural steel machines, and process machinery. It also provides total solution services including software for controlling machines, peripheral equipment, tooling, and maintenance.

◆ Isehara Works

The Isehara Works are in Isehara City, which is almost in the center of Kanagawa Prefecture, and this is where the Amada headquarters and Amada Solution Center are located.

The Amada Solution Center is a place for providing “improvement suggestions” to our customers for solving their manufacturing issues. It features an “Exhibition Hall” where people can get acquainted with our products, and serves the function of “demonstration processing” in which Amada uncovers customers’ issues and proposes solutions. Our manufacturing proposals can be tested here with our equipment as well.



Isehara Works

◆ Fujinomiya Works

The Fujinomiya Works (Fujinomiya City, Shizuoka Pref.) is in a scenic location on the south-west side of Mt. Fuji. With responsibility for development and manufacture, this site is a source of innovation.

The Third Factory of Fujinomiya is the world’s largest laser factory that manufactures our latest laser machines, and it has the manufacturing capacity of 140 units per month.

The factory’s concurrent design system with the Development Center has made our front loading development* and manufacturing system possible.

There are 4 Innovation Rooms at the Development Center, and with the aid of the latest design systems and video equipment, these rooms can be used by customers and development staff as creation spaces for cutting-edge development. As a result of the module design, created with 3-dimensional CAD, product manufacture can be tested from the design stage, thus allowing for modularization to a high degree of quality.



Fujinomiya Works

◆ Ono Plant

Ono Plant is located in Ono City, Hyogo Prefecture, at the center of Higashi-Harima region, and this area is known for its metal industry from the old days as the manufacturer of blades.

Today, Ono Plant serves the functions of development and manufacturing of band saw blades as the backbone factory of the Amada Group’s consumable business.

With our unique technology and daily pursuit of “QCD” + “I” (for “innovation”), we have acquired the number one share of the world bandsaw blade market. Our plant in Japan works together with our affiliated factories in Austria and China to develop products incorporating the latest technologies in response to the needs of our customers worldwide.



Ono Plant

*Front loading development: an effective development method where relevant divisions gather from the planning stage to study the products from multiple angles concurrently, and reduce the problems during the latter half of development.

◆ Amada Machine Tools

Amada Machine Tools is responsible for the development, manufacture and sales of metal cutting machines, machine tools (lathes, grinding machines).

In the cutting and structural business, we provide a total solution approach to cutting that maximizes machining performance with machines and blades. We also provide shaped steel processing systems to the steel-frame industry, which is seeing an increase in the size of components in cutting and hole-punching processes, along with a move towards high-speed processing and automatization.

Its machine tool segment offers systems that generate precision and value-added products with automation. The company's well-known creative product developments include profile grinding machines and combination lathe.



Amada Machine Tools, Toki Works

◆ Amada Tool Precision

Amada Tool Precision deals with the manufacture and sales of dies / toolings, and die peripheral processing devices, which are expendable parts of Amada's punching and bending machines.

The company has three separate manufacturing plants. One is the seamless and automated "876 Plant" that covers processes ranging from the procurement of raw materials, rough processing, and heat treatment, to grinding processing. Second is the "Resizing Plant" that accommodates quick-delivery orders, and third is the "Special Tooling Plant" that manufactures non standard tools made-to-order.



Amada Tool Precision

◆ Amada Engineering

Since it began operations, Amada Engineering has handled automated equipment for systems, and in the sheet metal system sector it has grown into a pioneering manufacturer of sheet metal system equipment, backed up by a wealth of experience and achievement.

This company has accumulated various manufacturing technologies and knowhow over the years. It plays an important role as a member of the Amada Group, and serves as a well-trusted engineering partner of global sheet metal factories, based on providing total solutions for customers' issues.



Amada Engineering / Fukushima Plant

◆ Nicotec

Nicotec manufactures and sells cutting tools, cutting machines, and cutting lubricants. Its headquarters is located inside the Isehara Works, and its manufacturing facilities are located in Hyōgo and Saitama Prefecture.

The Miki Plant, in Hyōgo Prefecture, is responsible for the development and manufacture of bandsaw blades, hole saws, coils and so forth. The Urawa Plant in Saitama Prefecture, meanwhile, comprises an Oil Center, a Service Center, and the Tokyo Sales Office, and the Oil Center is very active as a manufacturing and distribution hub, handling all the cutting and machine oil from across the Amada Group.



Nicotec / Miki Plant

◆ **Amada Toyo**

Since it began operating as the Toyokoki Co. Ltd. in 1956, Amada Toyo is responsible for the development, manufacture and sales of bending machines.

It became part of the Amada Group in 2009 and sells sheet metal general-purpose machines, as well as producing compact bending machines for developing countries.



Amada Toyo

◆ **Miyachi Corporation**

Miyachi Corporation develops, manufactures and sells equipment for fine welding and processing. Its four business segments are fine spot welders, laser welders, laser markers and automated systems that incorporate these types of machine. It is the only company offering both fine spot and laser welding technology, and its fiber laser equipment has revolutionized manufacturing technology worldwide. The Miyachi Group has offices in 16 countries and is planning to expand sales and service in the Asia region. By providing them with on-site support for their manufacturing activities, Miyachi seeks to be a great partner for its customers.



Miyachi Corporation

◆ **A succession of Technical Centers and Satellite Centers open**

The Amada Group has been steadily expanding its network of Technical Centers and Satellite Centers to provide community-based services and sites where we can cooperate with our customers to deal with today's sheet metal processing challenges.

A Satellite Center was opened in Chubu, Japan in April, 2012. Overseas, a Technical Center was opened in Los Angeles in June, 2012, and in São Paulo, Brazil in July. Thus we are expanding our network of sales hubs that are rooted in the community and easy for customers to drop in to.



Technical Center in Los Angeles (USA)

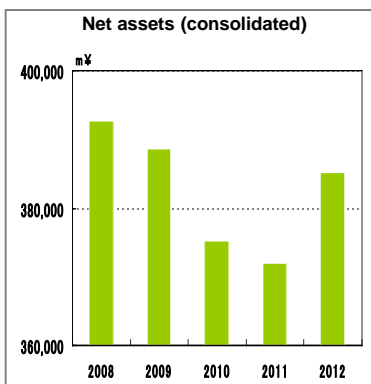
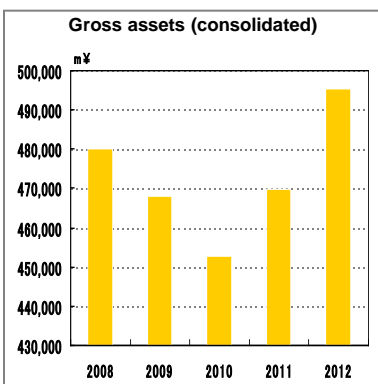
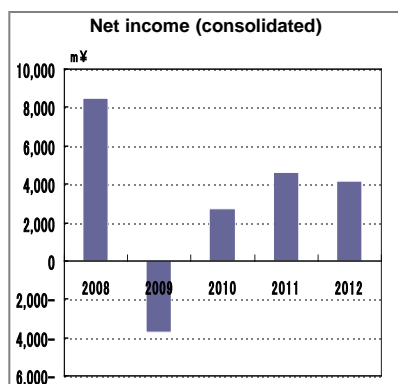
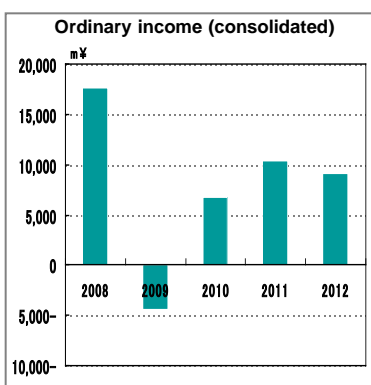
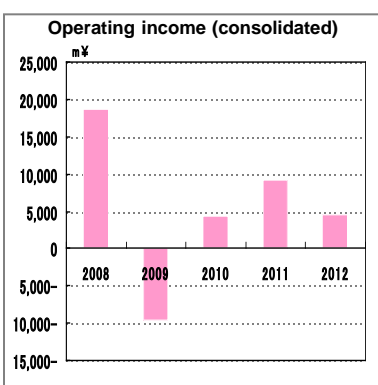
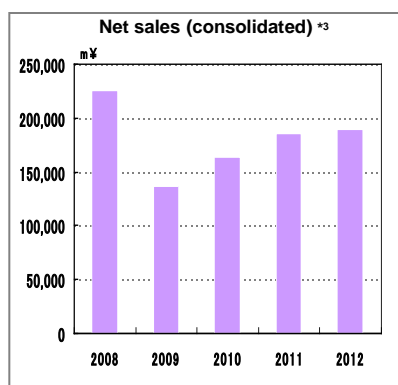
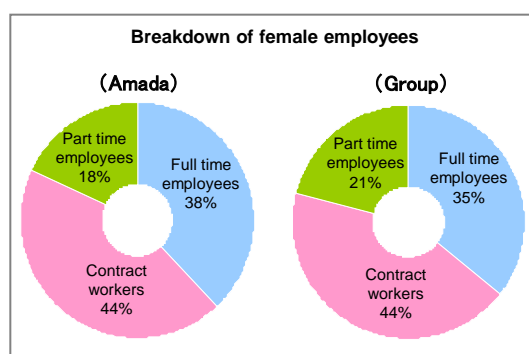
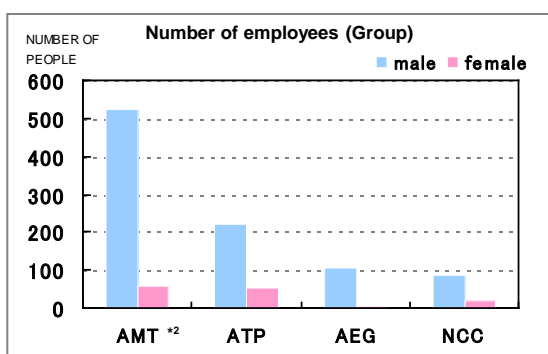
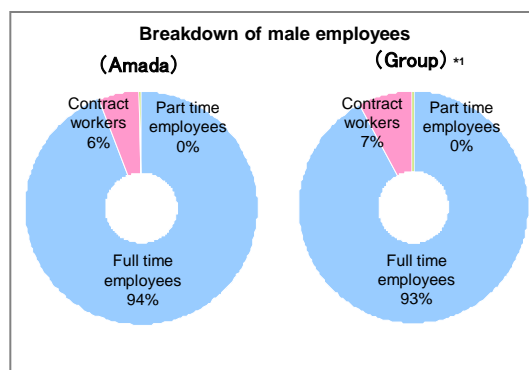
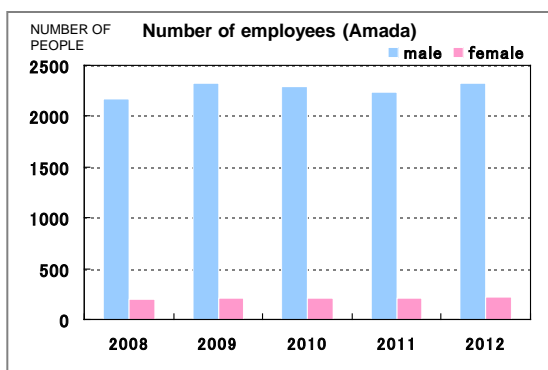


Chubu Satellite Center (Japan)



Technical Center in São Paulo (Brazil)

◆ Outline of Amada (as of end March 2013)



*1 Number of Amada Group employees includes the 5 group companies of Amada, AMT (including former AMFG), AEG, ATP, and NCC.
 *2 Acronyms for Group companies: AMT (Amada Machine Tools), ATP (Amada Tool Precision), AEG (Amada Engineering), NCC (NicoTec)
 *3 Scope of IR (Investor Relations) data: Amada Group consolidated reports

Amada products

Here is our product lineup – the Amada Group provides machines, software, peripheral equipment, and consumables for all metalworking processes including sheet metal processing, and cutting / pressing / machining.

Punching machine
EM-3612ZRT



Laser machine
FLC-3015AJ



Punch & laser combination machine
ACIES-2512B



Bending machine
HD-8025NT



Bending robot system
EG-6013AR



Peripheral equipment
FLC-3015AJ + ASF-3015



◆ Punching machines

Machines that punch various holes (round, square, and others) and cut sheet metal

Punching machines can punch out almost any shapes from sheet metal by using various punching tools. They can also create partial 3D shapes with forming tools, and drill/thread holes.

◆ Laser machine/combination machine

Machines that open holes and cut sheet metal with laser beams

The laser machine has the capacity to cut complex lines since it cuts the material with laser beams.

Using fiber laser oscillators developed in-house, FLC-3015AJ and FLA-3015AJ are the next-generation laser machines that allow for high-speed and energy-saving processing, as well as offering improved machining performance with highly reflective and difficult-to-cut materials.

A combination machine is a machine combining both laser and punching functions for further process integration.

◆ Bending machine/automated bending system

Also called “press brakes,” the machine bends sheet metal with two tools on the top and bottom

A sheet metal piece in a flat layout, which has been cut out with punching or laser machines, is bent with bending machines to create a 3D shape.

We also have an automated bending system in which robots lead the machines in bending instead of manual labor.

◆ Peripheral equipment

Peripheral equipment such as feeding units and unloading units are mounted to punching, laser, and combination machines to constitute an advanced automated sheet metal fabrication system.

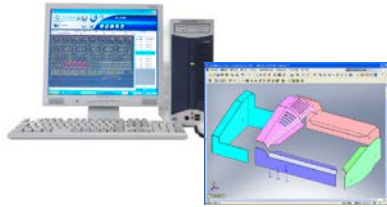
Tooling

Punching tools / Bending tools



Software products

AP100 / SheetWorks



Stamping press machine

SDE-2025



Band saw machine

PCSAW-720



Lathe

V-10T



Grinding machine

TECHSTER-126



◆ Tooling

Punching tools are used for punching machines, and bending tools are used for bending machines. Such tooling is also offered by Amada.

◆ Software

Production management, CAD / CAM and network softwares

In order to process the sheet metal parts the way customers like, we must give a series of commands to the machine. Our automated programming system and other software make this possible.

◆ Stamping press machine

Machines used for forming thin sheet metals with tooling
Stamping is a process where various 3D shapes are created from thin sheet metal. Typically, dies are attached to the stamping machine, sheet metal material is held in between them, and pressure is applied to create 3D shapes.

◆ Band saw machines

Machines that cut round bars and steel I beams with band saw blades and circular saw blades

In addition to the sheet metal machines, Amada also offers band saw machines used for cutting round bars and shaped steels such as H beams.

◆ Lathe

A lathe is a machine tool that cuts a rotating workpiece
A lathe is a machine tool that cuts metal with a fixed turning tool by rotating the workpiece. Amada also offers a combination machine that can make holes or screw holes into a workpiece after lathe turning.

◆ Grinding machine

A machine that processes the workpiece by grinding with rotating grindstones
A grinding machine processes a workpiece with grindstones that are rotating at high speed. It is used for processing very hard materials that other machines can't process, or in finish machining that requires high precision.

Welding machine
FLW-400M3



◆ **Welding machines**

One of the methods for bonding the sheet metal parts bent with bending machines is welding. Amada offers Fiber, YAG laser, and spot welding machines.

Welding equipment
ML-6810B



◆ **Welding equipment**

The ML-6810B is the perfect fiber laser welding machine for fine welding, machining and cutting of small metal parts. With Real-time Power Feedback for stable beam output and an optical isolator to avoid the effects of beam reflection on the work-piece, together with high output (maximum power 1 kW), this machine offers high quality in applications ranging from fine welding to high speed seam welding.

This environmentally friendly product has approximately 75% lower power consumption than conventional lamp-pumped laser welders.

ACIES Series
Winner of the 2012 (55th) Nippon brand
Award of Nikkan Kogyo Shimibun's Best 10
New Products Prize

In January 2013, the ACIES series received the Nikkan Kogyo Shimibun's 2012 (55th) Best 10 New Products Awards Nippon Brand Prize.

The best 10 New Products Awards are given to selected products developed and in practical use in a given year that contribute to the development of manufacturing and the strengthening of Japan's international competitiveness. The Nippon Brand Prize goes to "technology developed in Japan that has strong international competitiveness and the capability to become a force on the world market."

Having received a Masuda Award for the FOL-3015AJ in the 54th Awards last year, Amada has now won a Best 10 New Products prize for the second year running.



LASBEND-AJ
Maschinen Market (MM)
Award winner

The LASBEND-AJ won the MM Award at the October 2012 EuroBLECH fair in Hanover, Germany. The MM Award is an honor conferred by MaschinenMarkt (MM), Germany's most prestigious machinery business journal, on innovative products selected from the machines exhibited at each EuroBLECH.

The LASBEND-AJ supports blanking, forming, tapping and bending processes all on a single machine. Combining the latest sheet metal processing technologies, it is the ultimate processintegrating solution.



List of Prizes and Awards (since 1992)

Year	Equipment or installation concerned	Award	Sponsor
1992	APELIO II-357V punch & laser combination machine 	22nd Machine Design Award, Minister of Economy, Trade and Industry Prize (current Minister of Economy and Industry)	Nikkan Kogyo Shimbun
1994	ESPACIO Laser processing core	37th Top Ten New Product Award	Nikkan Kogyo Shimbun
1999	AP100 (automatic programming system for sheetmetal processing), and network system for bending machines	42nd Top Ten New Product Award	Nikkan Kogyo Shimbun
2002	MERC type M	45th Top Ten New Product Award, Main Award	Nikkan Kogyo Shimbun
2005	EMZ-3510NT NC Turret punch press 	35th Machine Design Award, Minister of Economy and Industry Prize	Nikkan Kogyo Shimbun
2007	PCSAW-700 Pulse cutting bandsaw machine	49th Top Ten New Product Award, Main Award	Nikkan Kogyo Shimbun
2008	“Sheetmetal course” (Joint award received by Amada / Amada School / Tokyo Institute of Technology)	The Japan Society for Technology of Plasticity Award, Education Prize 2008	The Japan Society for Technology of Plasticity
2009	LC-F1NT series Laser machine	51st Top Ten New Product Award, Main Award	Nikkan Kogyo Shimbun
	LC-C1NT series Process integration, built-in and compact combination machine 	39th Machine Design Award, Highest Award, Minister of Economy and Industry Prize	Nikkan Kogyo Shimbun
2010	Amada Isehara Works	13th Thermal Storage Gathering, Heat Pump and Thermal Storage Efficient Use Award	Heat Pump & Thermal Storage Technology Center of Japan
	Dorsal Power Pulse Cutting Band Saw Machine	Japan Institute for Promoting Invention and Innovation, invention awarding ceremony of Kantō area, Invention Encouraging Prize	Japan Institute for Promoting Invention and Innovation
2011	S-10 CNC Combination lathe machine	53rd Top Ten New Product Award, Main Award	Nikkan Kogyo Shimbun
2012	FOL-3015AJ Fiber laser machine 	54th Top Ten New Product Award, Masuda Award	Nikkan Kogyo Shimbun
	ACIES series Blanking process integrating solution 	42nd Machine Design Award, (Nippon Brand Prize)	Nikkan Kogyo Shimbun
2013	ACIES series Blanking process integrating solution	55th Top Ten New Product Award, (Nippon Brand Prize)	Nikkan Kogyo Shimbun
	Technical Center of Toki Works	Ministry of the Environment’s 2012 Power Saving and Lighting Design Awards, Public and General Facilities category	Ministry of the Environment
	FOL-3015AJ ACIES series	3rd Kanagawa Prefecture Global Warming Prevention Awards, Greenhouse Gas Emissions Reduction Technology category Award	Kanagawa Prefecture

Special Feature No.1: Amada ECO PRODUCTS user

Those models among our products that offer significant productivity and energy-saving improvements on comparable models are called “Amada ECO PRODUCTS”. Here we present an Amada ECO PRODUCT customer case study.

◆ Orion Machinery Co., Ltd. Company overview

Orion Machinery CO., LTD., a leading company in Hokushin, Nagano Prefecture, is an Amada customer that manufactures equipment for milking, temperature and humidity control, and feed management.

Since Orion began production and sale of the first Japanese-made “milker” in 1957, the development and manufacturing of such fundamental technologies as vacuum devices that draw milk gently, control systems enabling complex movements and refrigeration to preserve the freshness of milk has become the company's forte.

Orion's current core products are new production machines utilizing these fundamental technologies, for example precision temperature controllers that keep temperatures within strict limits in specific areas of a factory, chillers that use laser machines for refrigeration and other products with top market shares in this industrial sector.

As a highly environmentally conscious company, Orion aims to stand out from its competitors through vigorous research and development of ecological products with energy-saving, environmentally-friendly designs.

◆ FOL-3015AJ Fiber Laser Machine cuts power consumption by 75%

Installation of the FOL-3015AJ in March 2012 shortened processing time by approximately 30% and reduced power consumption by 75%.

As the company says, “When we started using the FOL-3015NT, a power meter was installed at the metalworking machine's power source for real-time measurement of power consumption. A power meter was installed at the FOL-3015AJ's power source too, and we measured daily power consumption. The data showed that power consumption after installing the new machine was on average 75% lower than for the old FOL-3015NT.”



The FOL-3015AJ fiber laser machine (with shuttle table fitted) at the Orion Machinery Co., Ltd plant

Interview

Because the FOL-3015AJ uses a fiber laser oscillator, its power consumption is dramatically lower than that of the FOL-3015NT, which has a CO₂ laser. This conclusive result initially caused some surprise:

As the President of Orion explains, "The first time I heard the report, I thought it meant '75% of previous power consumption', so I thought that there was only a 25% saving, but I was mistaken. I was surprised when I realized that the saving was 75%."

We were again asked to save electricity in summer 2012, after being asked to save it the first time in summer 2011. Our Manufacturing Division succeeded in cutting peak power consumption even further than the previous year, and one major factor in this was the electricity-saving performance of the FOL-3015AJ."



Most of the components for the PAP (Precision Air Processor) series, whose unique cooling circuit is designed for optimum energy saving and high precision, are produced on the FOL-3015AJ



A power meter is installed at the FOL-3015AJ's power source to monitor electricity usage in real time

With no major problems occurring after installation of the FOL-3015AJ, service personnel never had to be called out to repair a breakdown. The company told us that the high quality of our machine exceeded all expectations.

The original reason for installing the FOL-3015AJ was the need to increase production of cabinets for the PAP series of precision air processors, a core product that was in high demand. Not only did the machine fulfill this initial objective, it also unexpectedly shortened processing time by 30% and achieved a large reduction in power consumption, so our customer is very satisfied with this product.

Company Profile

Orion Machinery Co., Ltd.

- President : Tetsurō Ōta
- Location : 246 Kōtaka, Suzaka-shi Nagano-ken Japan
- Tel. : +81 26-245-1230
- Foundation : November, 1946
- Number of employees : 600
- Lines of work : Manufacturing and commercialization of industrial machinery (electronic device testing machines, pneumatic devices, refrigeration equipment, vacuum pumps and devices, heaters, etc) and dairy equipment (breast pumps, milk refrigeration machines, etc)

<http://www.orionkikai.co.jp/>

Main equipment

- Laser machines : FOL-3015AJ+LST-3015FOL, FOL-3015NT+LST-3015FOL
- Punching machines : Three sets of EMZ-3510NT +MP-1225MJ (two machines equipped with PDC all under MARS connection)
- Punch & laser combination machines : APELIO-357V+MP-1224EX (MARS connected)
- Press brakes : HDS-1303NT/8025NT, FBD I-8020NT, three FBD III-8025NT and three FBD III-1253NT
- Solid 3D sheet metal CAD : SheetWorks
- 2D CAD/CAM : AP100
- Bending data full automatic CAM : Dr.ABE_Bend
- Operating support System : vFactory

Environmental Management

Amada Group's mid-and-long-term environmental plan

The Amada Group will strive to promote environmental activities to ensure sustainable development of our business and society. Amada will help to build a bright and prosperous future for people around the world by providing environmentally-friendly, and energy-saving products.

◆ Long-term environmental plan

In order to make further advances with its environmental conservation activities, the Amada Group has drawn up a long-term environmental objective (dubbed "Amada Green Action"), that extends as far as 2020. With this goal in mind, it is tackling issues such as the development of eco-friendly products, as well as energy and resource conservation, along with waste reduction, by improving the efficiency of its business activities.

Three goals of "AMADA GREEN ACTION"

■ Products

By 2020, we will reduce CO₂ emissions of all products by an average of 25%.

■ Product creation

By 2020, we will reduce CO₂ emissions from our establishments and factories by 25% in terms of specific consumption.

■ Biodiversity

We will focus our efforts on conserving and regenerating biodiversity in order to pass on this country, which is rich in natural blessings, in good shape to future generations.

◆ Mid-term environmental plan

	Themes of activities	Mid-term goal (fiscal 2015)	Goals for fiscal 2012
Preventing global warming	[Product development] Reduce CO ₂ emissions* ¹ throughout the product life cycle to contribute to the prevention of global warming	Release products with reduced CO ₂ emissions by an average of 25%	Reduce CO ₂ emissions through the release of "eco" products (As a whole : -7.2%)
	[Business activities] Promote energy saving and resource saving in business processes to reduce CO ₂ emissions	Prevent global warming by promoting energy saving *compared against the benchmark year *2: -20.6%"	Reduce by 4.8% from the previous year (domestic Amada Group) (+3.9% against the benchmark year)
Effective utilization of resources	Promote effective use of limited resources and contribute to creating a recycling society	(1) Achieve "clean factories" • Activities based on the resource-saving roadmap (Fujinomiya, Amada Tool Precision, Amada Machine Tools Toki)	• Continue introduction and roll-out of material flow cost accounting *3 (Amada Machine Tools Toki) • Waste reduction based on a resource-saving roadmap (Fujinomiya, Amada Tool Precision, Amada Machine Tools Toki)
		(2) Achieve/maintain zero-emission factories (From 4 to 6 facilities) • Less than 1% a year of landfilled solid waste (relative to total waste) *Amada Group to achieve zero emissions by 2015"	• Achieve zero emissions at 4 plants (Fujinomiya, Amada Tool Precision, Ono, Amada Machine Tools Toki) • Continue IN/OUT measures
Regulated chemicals control	Strengthen activities related to control of regulated chemicals	Product development with green procurement (Reduce the use of RoHS *4 directive chemicals)	Fully abolish RoHS directive chemicals • Sheet metal and machine tools destined for EU export to be RoHS-compliant
		Reduce the use of regulated chemicals "Appropriately control chemical substances, and reduce their use within the manufacturing process" (PRTR *5, VOC *6)	Strengthen environmental risk management • Regulation management via a register of laws and regulations; ensure compliance through compliance assessment (Nicotec Co. Urawa, AEG) • Extend use of toluene-free paint (AEG, Amada Machine Tools Toki) • Test TX-free paint and improve paint technologies (Fujinomiya) • Improve operations through solvent recycling (Amada Machine Tools Toki)
Biodiversity	Preserve and regenerate biodiversity to pass on this country, which is rich in natural blessings, in good shape to future generations.	Activities based on biodiversity conservation plans at each site N.B.: activities to protect endangered species at each site in partnership with the local community	• Amada Forest management (Fujinomiya) • Biodiversity activities in partnership with the local community (Isehara)
Environmental management	Respond faithfully to voices of stakeholders including customers to fulfill social responsibility as a company	• Strengthen the Amada Group's environmental administration, and promote CSR activities • ISO14001 group integration (7 sites) • Establish waste disposal contractor certification scheme	• Environmental Ecology Promotion Committee to carry out facilitation activities; ISO integration facilitation activities • ISO14001 integration (Isehara, Fujinomiya, Ono, Amada Machine Tools Toki, Kansai Technical Center) • Strengthen waste materials compliance
		• Implement environmental communication (Organize tours of plants and other facilities)	• Issue the environmental report "Forest-In Office 2012" • Implement environmental communication • Participate in regional clean-campaigns

*1: CO₂ emissions data is calculated based on the calculation manual for the "Act on Promotion of Global Warming Countermeasures"

*2: Benchmark year: FY2007

*3: Material Flow Cost Accounting: a new method of environmental management accounting that focuses on waste generated during production processes. It is one outstanding environmental accounting method that achieves both "reduction of waste" and "productivity improvement" at the same time.

*Acronyms for Group companies: AMT (Amada Machine Tools), ATP (Amada Tool Precision), AEG (Amada Engineering), NCC (Nicotec)

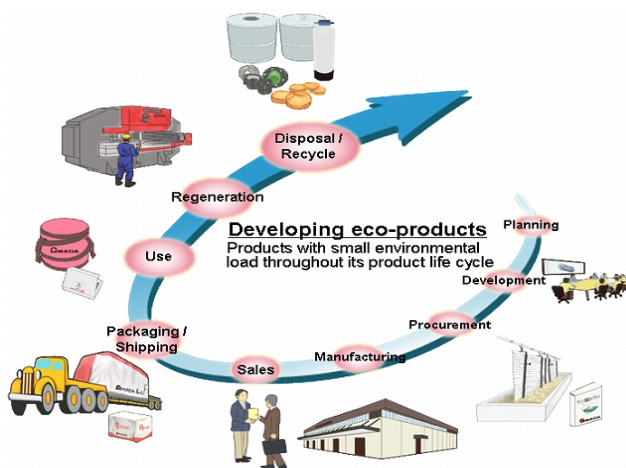
◆ Amada Group Environmental Management

Fundamental to the Amada Group's environmental management approach is environmental protection activities during our products' life cycles with the aim of continually reducing environmental impacts "from the cradle to the grave", meaning throughout the life of a product from planning through development, procurement, manufacture, sale, shipping and use to disposal.

At Amada we are developing lifecycle management to create this kind of entire life for our eco-friendly products.

◆ Performance in fiscal 2012

In fiscal 2012 we actively made efforts in five different areas – global warming prevention; efficient use of resources; chemical substance management; biodiversity; and environmental management – and the following table shows how we performed.



	FY2012 results	Goals for FY2013
Prevention of global warming	Reduce CO ₂ emissions by releasing ecological products (As a whole : -6.6%)	Reduce CO ₂ emissions by releasing ecological products (Amada Group as a whole : -9.9%)
	Reduce CO ₂ emissions at major domestic bases by 5.3% relative to the benchmark year (+2.5% on previous year)	Reduce Amada Group CO ₂ emissions by 3.7% on previous year (CO ₂ intensity target 0.912)
Effective utilization of resources	<ul style="list-style-type: none"> Horizontal development of material flow cost accounting (Fujinomiya, Amada Machine Tools Toki) Alkaline ionized water used to extend cutting fluid life (Amada Machine Tools Toki) 	<ul style="list-style-type: none"> Continuation of improvements to IN-OUT measures Transition to recycling and bioplastics (for product packaging material)
	<ul style="list-style-type: none"> Zero emissions maintained at 3 plants, 1 plant in transition to zero emissions (Amada Tool Precision : 0.01%, Fujinomiya : 0.172%, Amada Machine Tools Toki : 0.0%) IN measures: continuation of reduction of packaging materials used in product delivery (Amada Tool Precision, Fujinomiya, Amada Machine Tools Toki, AEG) OUT measures : New recycling channels developed (Ono) 	<ul style="list-style-type: none"> Maintaining of zero emission plants (Fujinomiya, Amada Tool Precision, Amada Machine Tool Toki) Initiatives towards zero emission factories (Ono, AEG, Nicotec Co. Urawa)
Regulated Chemicals control	<ul style="list-style-type: none"> RoHS compliance for newly registered products and currently registered, on-the-market products Product assessment carried out (10 new models) Publication of English version of Green Procurement Guidelines 	<ul style="list-style-type: none"> Efforts towards total elimination of chemical substances regulated by the RoHS Directive New products to be RoHS-compliant (75% green procurement rate) Proportion of unsurveyed on-the-market products to be under 15%
	<ul style="list-style-type: none"> Maintained Hazardous Materials storage management and supervision (at each site) Environmental risk assessment (Nicotec Co. Urawa, AEG) 	<ul style="list-style-type: none"> Strengthening of environmental risk management Implement environmental audit
	<ul style="list-style-type: none"> Toluene- and xylene-free detergent introduced (Amada Machine Tools Toki) Nitrotherm spray introduced (Fujinomiya) Solvent recycling and collection system in operation (Amada Machine Tools Toki) 	<ul style="list-style-type: none"> Toluene-free paint use spreading across the group (AEG, Amada Machine Tools Toki) Introduce TX-free paints (Fujinomiya)
Biodiversity	<ul style="list-style-type: none"> Managed a "recreational forest" under the Amada Forest project (Fujinomiya) Surveyed and mapped on-site vegetation (Isehara) 	<ul style="list-style-type: none"> Activities based on the biodiversity conservation plan for each site Site-specific conservation activities Endangered species conservation activities Conservation activities in partnership with the local community
Environmental management	<ul style="list-style-type: none"> Environmental Ecology Promotion Committee carried out facilitation activities Expanded the scope of ISO 14001 integration (Isehara, Fujinomiya, Ono, Amada Machine Tools Toki, Kansai Technical Center) Rolled out facility guidelines on waste (Isehara) 	<ul style="list-style-type: none"> Implementation of Group-wide activities through the Environmental Ecology Promotion Committee ISO14001 integration (Inicotec Co. Miki) Establish uniform criteria for waste-disposal outsourcing contracts
	<ul style="list-style-type: none"> Publication of the "Forest-In Office 2012" environment and society report Environmental communication implemented through tours of plants and other facilities (Isehara, Fujinomiya, Ono, Amada Machine Tools Toki) Full participation in local clean-campaigns 	<ul style="list-style-type: none"> Publication of the "Forest-In Office 2013" environment and society report Environmental communication (tours of plants and other facilities) Social contribution activities at each site

*4 RoHS : Stands for "Restriction of Hazardous Substances." A directive that specifies hazardous substances contained in electrical equipment and electronics and prohibits their use.

*5 PRTR : Stands for "Pollutant Release and Transfer Register," in which the emissions and movements of environmental pollutants are registered. A system for compiling and announcing the emission volumes and travel distances of hazardous chemicals.

*6 VOC : Stands for volatile organic compounds. Regarded as a cause for chemical sensitivity syndrome and sick building syndrome.

Prevention of global warming (product development)

Amada supplies its customers with products (industrial goods) including metalworking machines, consumables and software together with maintenance services. Believing that the most effective strategy to control our products' lifecycle contribution to global warming is to limit CO2 emissions (by reducing power consumption) in the customer use stage, we offer low carbon emission products.

Product environmental assessment system and Amada ECO PRODUCTS certification system

The Amada Group has two systems for evaluating product environmental performance, the product environmental assessment system and the Amada ECO PRODUCTS certification system.

Carried out as part of the design review (DR) at each step of the development process, the product environmental assessment aims to ensure that we do not sell products with a severe environmental impact. All new products undergo this assessment, and we have a rule prohibiting the sale of any product that does not meet the assessment criteria.

The Amada ECO PRODUCTS certification system, like product environmental assessment, is part of the DR, and it is intended to appeal to customers as an evaluation of our products' environmental (energy saving) performance and improved productivity. Certified products are granted the Amada ECO PRODUCTS symbol.



ECO PRODUCTS symbol

Introducing Amada eco-friendly products

◆ EM-ZR and EM-M II series

The EM-ZR series and EM-M II series are punching machines developed to replace the current EMZ-NT energy-saving ECO PRODUCTS.

Punching machines featuring a lightweight 3,000 mm slide mechanism capable of processing 5' x 10' material with one clamp, an MPT (multipurpose turret) for high-speed tapping to shorten processing time, and controllable cooling fan operation allowing power consumption 31-37% lower than that of the previous models (values obtained on EM-3612ZR, EM-3612ZRT, EMZ-3612M II and EMK-3612M II models).



EM-ZR and EM-M II series

◆ FOL-3015AJ

The FOL-3015AJ incorporates the world's first fiber laser oscillator, developed by Amada, and it offers improved performance in comparison with CO2 laser metalworking machines when processing aluminum, brass, copper, titanium and other highly reflective or difficult-to-cut materials. At the same time it consumes 80% less power and combines increased working area with low running costs.



FOL-3015AJ

◆ PCSAW-720

The PCSAW-720 is a bandsaw developed to replace the HFA700C II. PCSAW stands for "Pulse Cutting Bandsawing Machine". During operation, the machine sends pulse vibrations to the blade, thus reducing cutting resistance and blade wear while ensuring high-speed, high-precision cutting.

The high speed of cutting shortens processing time, allowing power consumption 31% lower than that of the previous model.



PCSAW-720

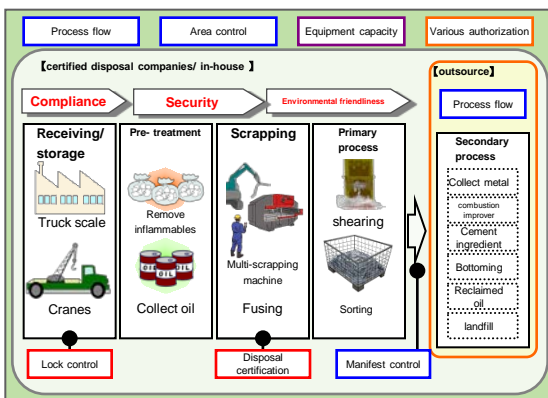
* Design Review: In order to develop products that satisfy our customers, all the relevant business divisions assess the design plans created by our design teams from various perspectives, exchange views, and request improvements when necessary.

Waste disposal contractor certification system

Based on the principle of Extended Producer Responsibility, we believe that we are responsible for seeing our products through to their proper disposal when they finish their product life. This is why we established our "disposal certification system for used products" in FY2008, and have been giving certification to waste processors who dispose of used products based on our standards.

Currently, six facilities of two partner companies have been certified throughout Japan to provide proper disposal. The recycling plants at our certified facilities ensure compliance of all laws and regulations such as the "Waste Management Law" and the "Fluorocarbons Recovery and Destruction Law." Furthermore, in addition to ensuring security, we also provide "disposal certification" to verify functional disposal of used parts.

We will continue to increase the number of certified waste processors.



Flow of used product disposal process
Processors are certified based on our standards related to area control, capacity, and various permits.

CO2 emissions during disposal phase

We conducted research on the amount of CO2 emissions and the environmental load during the disposal phase of used products, as a part of the LCA (life cycle assessment) of products. The CO2 emissions for the disposal of 1 laser machine weighing 7 tons, for example, was 163 kg-CO2. This equals to the disposal of approximately 5 personal computers. Our findings also show that the environmental load at the disposal phase is low with a high recycling ratio of 99%.

Kanagawa Global Warming Prevention Awards Prize

The Amada Group has received a prize in the Greenhouse Gas Emissions Reduction Technology category of the Third Kanagawa Prefecture Global Warming Prevention Awards.

These Awards were established in 2010 as a way of honoring outstanding global warming prevention initiatives by companies, associations and individuals.

Amada ECO PRODUCTS were represented in the Awards by the FOL-3015AJ and ACIES. We were chosen to receive the prize because of the innovative features and energy-saving performance of both machines, our product assessment and Amada ECO PRODUCTS standards, and our contribution over many years to greenhouse gas emissions reduction.



Kanagawa Global Warming Prevention Awards Ceremony
(Photo courtesy of Kanagawa prefecture)

Eco Information Mark



Trademark # 5107472
5188839

Amada has started the Eco Information Mark system from August 2007. We understand the importance of providing information, and this is a way for us to provide information on environmental matters pertaining to Amada products more broadly and specifically.

Such information is provided together with the mark, so that we can easily communicate the details of our environmental efforts.

環境への対応は、明日に続くモノづくりのために

e info

LC-CINTは、本体のRoHS指令(*)1) 対象の有害化学物質について配慮しています。お客様の厳しい環境対応の要求に応えます。さらに、低消費電力と高速化による加工時間の短縮により、CO2排出削減に貢献します。

※1) 特定有害物質の使用制限について、環境省令(低)による限り

お客様の製品に搭載する部材には、RoHS指令対象物質を使用しておりません。お客様が日産行う保守点検時(*)2)、廃棄する部品には、RoHS指令対象物質を使用しておりません。

※2) 取扱説明書に記載の保守点検時



Prevention of global warming (business activities)

We promote energy / resource saving in our business processes to reduce CO2 emissions. Although we focus on CO2 reduction issues here since they are relatively prominent, we believe that low-key efforts within individual business processes are crucial for achieving significant results.

Power Saving and Lighting Design Awards (Toki Works)

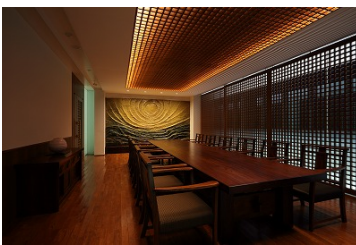
On January 15th, 2013, Amada Toki Works Technical Center won a prize for excellence in the Public and General Facilities category of the Ministry of the Environment's 2012 Power Saving and Lighting Design Awards.

Designed as an environmentally friendly facility, the state-of-the-art Toki Works Technical Center has all-LED lighting that complements the design of the interior space while at the same time reducing annual power consumption. Great ingenuity has gone into giving the building's exterior its softly glowing appearance and shaping the restfully expansive interior.

The above honor was conferred in recognition of the building's combination of outstanding energy-saving performance and excellent design qualities.



Toki Works Technical Center lighting



The "Wa" Royal Room

Installation of solar panels (Ono Plant)

The entire lighting system in No.1 Plant is powered by solar panels installed on the plant's roof at the time of its construction. They have a power output of 100 kW and produce 100,000 kWh of electricity a year, enough for about 300 households.

An electronic noticeboard inside No.1 Plant displays current generating status, the amount of power generated up to now and other information to employees.



Solar panels at Ono Plant



The electronic noticeboard shows generating status

Eco Ice (Isehara Works)

This system, which uses discounted night-time electricity to store ice in storage tanks, has been installed at three locations within Isehara Works.

The ice created during the night is useful for cooling and contributes to reducing the building's power usage and daytime peak power.



Eco Ice stores cold energy

Effective use of resources

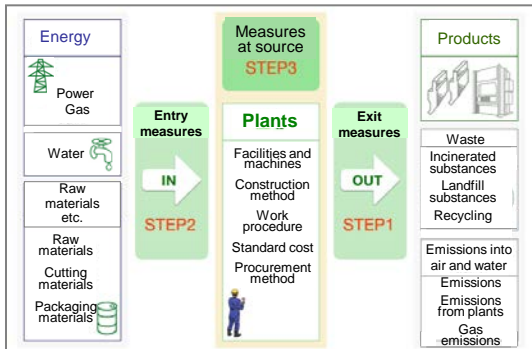
Amada will contribute to a recycling-oriented society by promoting the effective use of resources. We are making various efforts in energy-saving and resource-saving by applying the ideas of employees on the front lines.

Zero-emission factories

Zero-emissions is “a philosophy that aims for a society without waste, by recycling the waste discharged from a particular industry” (advocated by the United Nations University in 1994), and each company applies this by its own standards. Amada’s zero-emission standards are “we will keep the waste that eventually ends up in landfills under 1% of the total weight, and this must continue for over a one year period.”

One of our specific activities is “exit control,” which is “producing no waste.” We do this by finding recycling options for waste. Another activity is “entrance control” which is “keeping waste out,” and we are promoting the use of returnable cases and packaging material reduction.

As a result, the Fujinomiya Works has achieved the zero-emission standard in May 2008 and Isehara Works in March 2009, and the works have since maintained this status.



Steps towards achieving zero emissions at our plants

The Third Factory at Fujinomiya Works is the world’s largest assembling plant of laser machines, and it meets the standards of a Clean Factory.

This factory fully uses the Yatai booth production method*, where each Yatai booth is a mini factory. All parts necessary for assembly are provided in a kit, and with all the necessary tools within the operators’ reach, they can continue working without interruption.

Furthermore, dust can cause trouble during laser machine assembly, so the production line has come up with creative ideas, such as changing the “air cleaners” to vacuums, and making the air compressor rotors ceramic in order to allow the use of water instead of oil.

Repurposing system components from exhibition displays

To present our products and proposals for product creation to our customers, we display our machines at Amada exhibitions and open exhibitions held in Japan and overseas. In fiscal 2009 we switched to reusable system components for the display stands at open exhibitions. We use these components multiple times and recycle any components that are difficult to reuse.

To reduce waste, display stand components used at the Amada exhibition in Osaka in 2012 were sent to our Isehara works for reuse.

Besides offering our ECO PRODUCTS, in the future we shall continue working to make our display stand components environmentally friendly.

Clean Factory (Fujinomiya)

Clean Factory is an environmentally-friendly factory that reduces the environmental load generated by production, which includes zero-emission (reduction of waste) activities as well as energy-saving efforts. It also includes the reduction of CO₂ emissions to prevent global warming, and the reduction of VOC (Volatile Organic Compounds) used in factories.



Display stand components from our Osaka exhibition being reused at Isehara



* Yatai booth production method: a production method that realizes clean and digital manufacturing through the use of an IT production control system. The parts are supplied to the booth JIT. One booth is approximately 80 square meters, and each booth is equipped with gas, air, water, and power, which are centrally controlled. Dust is also controlled to maintain a clean environment. (Yatai = portable stall in Japanese)

Amada Group's efforts towards effective use of resources

At Amada Group, we are working to ensure that, consistent with their operations and specific characteristics, all our facilities are saving energy and using resources efficiently.

Here we present some of our energy- and resource-saving initiatives.

◆ Amada Machine Tools (Toki Works) Recycling cutting fluid

To control the typical metal shop odor and lengthen the time between cutting fluid changes, we have begun using alkaline water in our metal-working operations.

The water-soluble cutting fluid used previously would, as it decayed, cause odor problems and create sludge that had to be removed from tanks. To avoid malodors, the cutting fluid had to be changed every six months.

Since starting to use alkaline ionized water about two years ago, we have been able to prevent cutting fluid decay and keep metal shop odor under control. We have also observed that alkaline water has a cleaning effect, preventing dirt from adhering to machine interiors.

Using alkaline water allows the cutting fluid to be changed less often than before, and it has reduced the amount of waste fluid produced.



Alkaline ionized water tank



Alkaline water machine

◆ New material for blade guards introduced (Ono Plant)

At our Ono Plant, we have started using biomass caps in the guards that protect bandsaw blades. Adding biomass* derived from rice bran allows us to reduce the amount of polyethylene used, cutting CO₂ emissions from production, molding and incineration by 16.5%. The biomass caps have a slight plant-like aroma and more of a honey color than conventional caps.

Biomass is used in a few of our products at the moment, and we are continuing research into ways of using it in all our products in the future.



Cap containing 20% biomass

◆ Introduction of new paint technology (Fujinomiya Works)

A Nitrotherm spray system using nitrogen gas for painting operations was introduced at Fujinomiya Works in 2012. By producing nitrogen ions, this system gives the paint molecules (particles) a uniform magnetic charge opposite to that of the item being painted, thus considerably improving paint transfer efficiency.

Also, heat from the ionized nitrogen lowers the viscosity of the paint, meaning that less solvent is needed to dilute it.

Introducing this new paint technology has allowed us to reduce the amount of paint used by 27%, VOC emissions by 35% and paint sludge (industrial waste) by 25%.



Nitrotherm spray

* Biomass: a renewable organic material derived from living organisms

Chemical substances control

Amada is reinforcing initiatives for controlling regulated chemical substances. We are committed to providing safe machines made of safe materials.

Green Procurement

Amada positions "green procurement," procuring materials with small environmental loads, as one of its important environmental preservation activities for providing environmentally-friendly products to customers.

We request our suppliers for chemical substance analysis and information on materials being used in parts based on the "Amada Group Green Procurement Guidelines" that we established in April 2004.

Our products, including sheet metal machines, are not applicable for the RoHS directive*1 enforced in July 2006, but we promote the non-use of RoHS regulated chemical substances because they may come in contact with our customers' products processed with our machines.

◆ Chromate Treatments

Amada is currently changing from hexavalent chromium, which has a large environmental load, to the more environmentally-friendly trivalent chromium for the surface treatment of Amada designed mechanical parts.



◆ Lead-free solder circuit boards

Lead-free solder circuit boards were developed as the electric circuit board in the control section of Amada machines. They are used in our LC-F1NT series.



◆ Oils

All oil substances including operating oil, lubricants, and cutting oil, are categorized based on danger / hazardous levels according to GHS*2, and the results are listed on the MSDS*3 (Material Safety Data Sheet).

Amada-designated parts for recovery system

Among our products, there are some that contain chemicals that are now designated as regulated chemical substances because there were no materials available that could technically serve as substitutes at the time that they were manufactured. Normally customers do not come in contact with parts like this, but it wouldn't be good for the environment if they were disposed of with the others. This is why we collect the parts that are replaced after their life cycle and dispose of them appropriately as a responsible manufacturer, according to the "Amada-designated parts for recovery" system that we established in 2003.

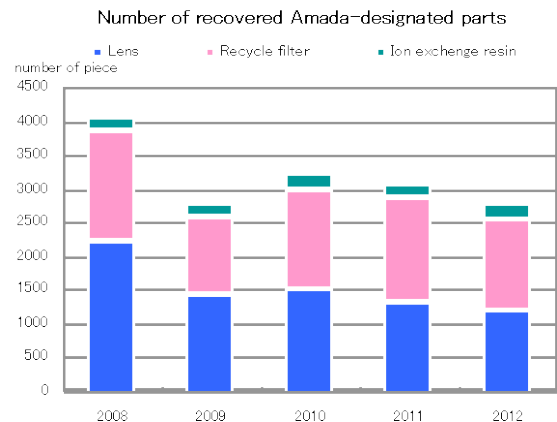
For instance, the light focus lens (coated with selenium compound) used in laser machines applies to this case, and after collection, we determine whether they can be reused, and if not, we dispose of them properly.



Trademark #4778275



Light focus lens for laser machines (includes selenium compound)



*1 RoHS directive: a European derived initiative in which the elimination of certain hazardous substances in electrical and electronic equipment is the key objective.

*2 GHS: abbreviation for "Globally Harmonized System of Classification and Labeling of Chemicals"

*3 MSDS: A Material Safety Data Sheet (MSDS) is a document mentioning the hazardous and harmful chemical substances of a product, and is delivered when the product is given or provided to another company.

Biodiversity

Amada will help preserve / regenerate biodiversity in order to pass on our land, which is rich in natural blessings, to the next generation.

Fujinomiya Works Amada Forest

About 60% of the Fujinomiya Works grounds, just over 100 acres, is still woodlands, and approximately 700 plant species are known to exist there. We shall continue to protect the abundant flora and fauna in this forest through vigorous management and conservation activities.



Fujinomiya Works Amada Forest

◆ Pest control using cypress chips

We have been making effective use of the timber obtained through tree thinning in the Amada Forest at Fujinomiya Works since March 2011. Most of the trees thinned there are cypress, and the wood from these trees is chipped and spread around planted areas on the site. The chips prevent light from reaching the surface of the ground, thus effectively controlling weeds. They also keep pests away from planted areas. This efficient use of wood from thinning helps us both to reduce expenditure on weed control and to protect planted areas.



Chips from thinned cypress trees

◆ Common buzzard nests

An environmental baseline survey conducted over a period of two years from 2010 confirmed that some male-female pairs of the common buzzard (*Accipitriformes: Accipitridae*), an umbrella species* of the Amada Forest, were present in live trees there. These birds can be seen circling above the Forest on fine days. Also, although sparrowhawks and northern goshawks are not known to build nests in the Forest, their food remains have been noted.

Rooftop garden (Isehara Works)

The rooftop garden near the Isehara Works main building was created about 35 years ago.

Rooftop gardens for environmental conservation purposes were not common at the time, and the

Amada rooftop garden was one of the first to be installed. It started with a handful of trees, but there are now several dozen.

A variety of birds can be seen in the garden, and great tits have been noted in the nesting boxes there.



Rooftop garden



Nesting boxes

Using waste timber chips (Isehara)

Wood from pruned trees and shrubs at Isehara Works is chipped and reused. This wood was previously discarded as waste, but now we chip it by hand and spread it on areas of planted ground.

In addition to having an attractive appearance, the chips stop soil from drying out and weeds from multiplying. Also, as time goes on, they decay into fertilizer. Efficient on-site use of site-produced waste reduces the amount of waste and makes for better use of natural resources.



Area spread with chips



Turning the chips over reveals compost beneath

*Umbrella species : consumers at the top of the food chain or ecosystem pyramid in a given area

Environmental accounting

Amada has adopted environmental accounting to use for reasonable decision making by understanding the costs and benefits related to environmental preservation activities.

The adoption of environmental accounting

Amada has adopted environmental accounting since FY2005 for the purpose of understanding the costs and the economic impact associated with environmental preservation measures, and providing information useful for decision making by stakeholders.

Coverage was increased to include the Ono Plant from fiscal 2008, the Fujinomiya Works in fiscal 2009 and the Toki Works (Amada Machine Tools) in fiscal 2011.

To summarize the cost and economic impact (profit of actual results) associated with the environmental preservation measures, an "environmental accounting" item was added to the monthly accounting system for automatic calculation.

◆ Environmental preservation cost

The main areas in the conservation costs of the fiscal year of 2012 were the research and development costs related to the Amada Eco-friendly Products, and the resource circulation cost.

The research and development costs comprise not only the costs relating to current eco-product certified models, but in addition the costs for new products requiring recognition as eco-friendly products are also included in the calculations. The cost of test materials and the manufacture of jigs form a large part; but the test research expenses and the man-hours of the staff involved in development are not included.

◆ Economic impact associated with environmental preservation measures

The main economic impacts for fiscal 2012 were business income, including income from recycling waste products of business activities, and capital investment.

The main sources of recycling income are metals such as iron, aluminum and stainless steel.

Unit: 1000 yen

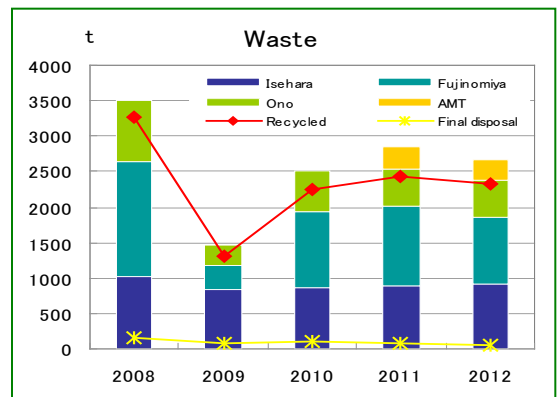
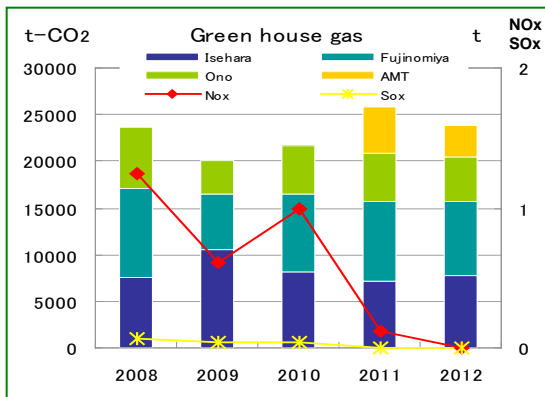
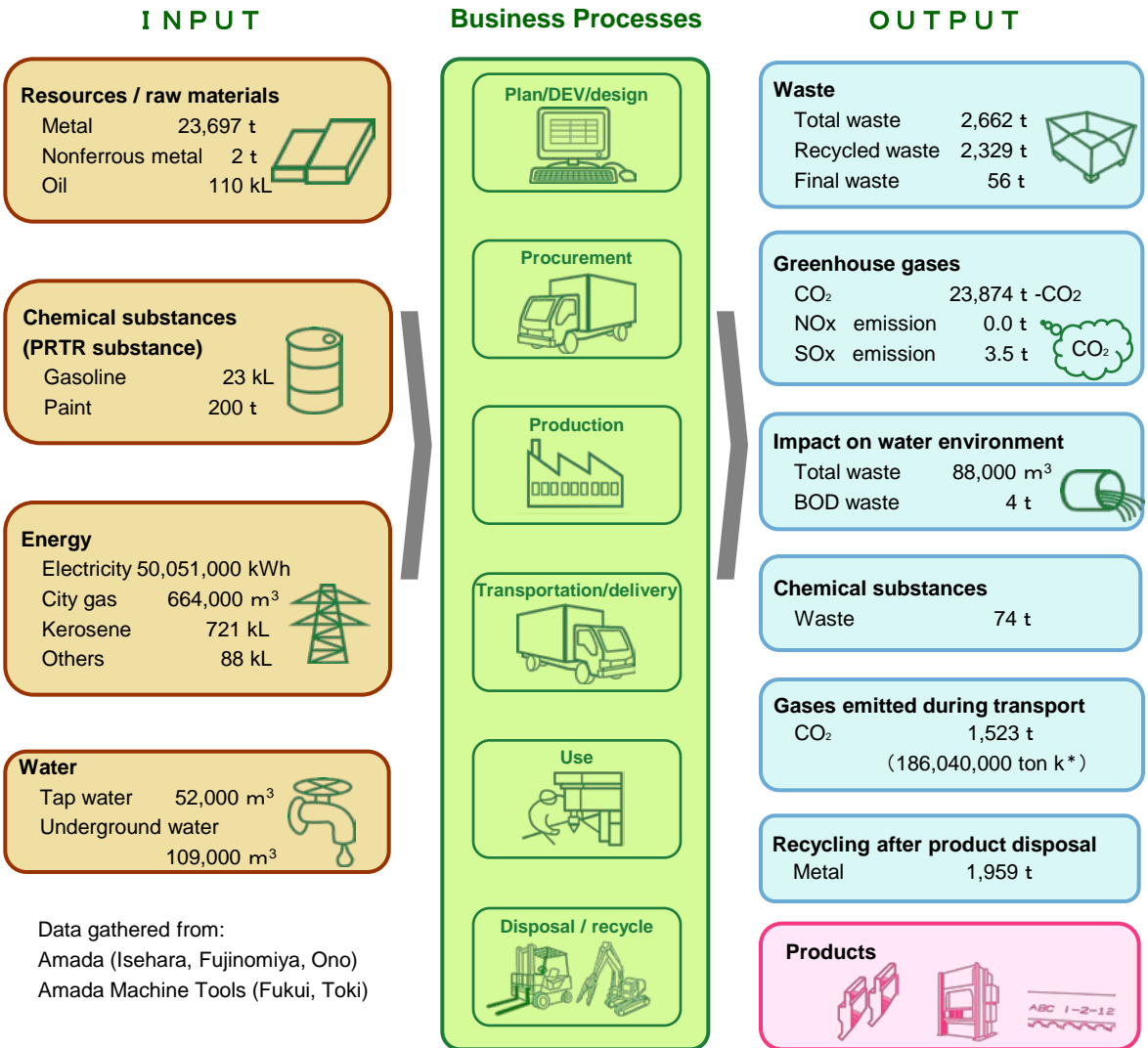
Environmental accounting items		Fiscal2008	Fiscal2009	Fiscal2010	Fiscal2011	Fiscal2012
Environmental preservation cost	Cost	323,689	456,854	882,927	850,541	540,557
	Investment	470,233	0	5,325	263,759	8,207
	Total	793,922	456,854	888,252	1,114,300	548,764
Economic impact accompanying environmental preservation measures		24,317	17,299	31,516	35,479	23,403

Environmental accounting items		Unit	Fiscal 2010	Fiscal 2011	Fiscal 2012
The material effects related to the environmental conservation policy	CO ₂	Tonnes of CO ₂ per year	235.2	361.97	645.26
	Waste	Tonnes per year	21.37	50.35	22.84

Material balance

We quantitatively grasp and analyze the environmental impact of our products throughout their life cycle, and we apply the results to our environmentally-friendly business activities.

<Domestic>



*Calculated with METI's revised CO₂ calculation method ton / kilo Alternative method B.

<Detailed Data>

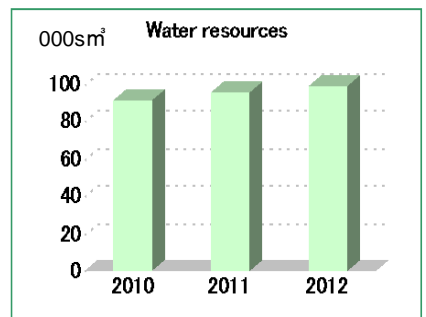
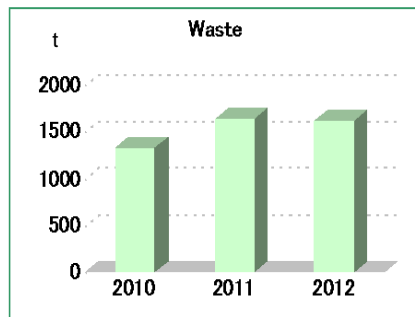
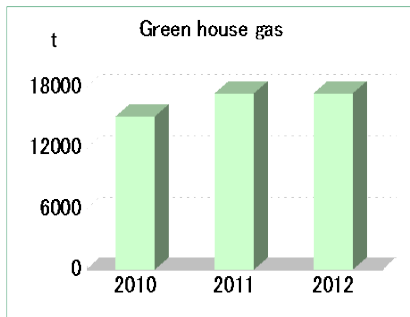
		2008	2009	2010	2011	2012
CO ₂ intensity	Isehara Works	0.0422	0.0372	0.0386	0.0340	0.0375
	Fujinomiya Works	0.2166	0.3966	0.2194	0.1645	0.1776
	Ono Plant	1.8530	1.8592	1.5527	1.4831	1.8145
	Toki Works	0.3551	0.6157	0.3693	0.4183	0.3480

		2008	2009	2010	2011	2012
PRTR-reportable chemical substances in tons	Isehara Works	0.001	0.001	0.0012	0.0011	0.0048
	Fujinomiya Works	80	42	63	70	50
	Ono Plant	0	0	2	0	0
	Toki Works	68	20	39	31	24

		2008	2009	2010	2011	2012
Amount of water resources used in 000s m ³	Isehara Works	94	70	69	62	65
	Fujinomiya Works	71	56	65	63	73
	Ono Plant	22	10	7	9	9
	Toki Works	98	84	98	59	13

		2008	2009	2010	2011	2012
Impact on the aquatic environment (waste) in 000s m ³	Isehara Works	38	35	39	36	43
	Fujinomiya Works	50	21	39	26	30
	Ono Plant	22	10	7	8	7
	Toki Works	100	116	94	54	8

<Overseas>



Special Feature No. 2: Amada overseas subsidiaries'

Amada is a global company with sales hubs and manufacturing sites in every country of the world. Each of our subsidiaries throughout the world is making its own contribution to local society.

—With our local community—

AMADA EUROPE S.A.

Factory visit for students

Based on agreements with local high schools and universities, Amada Europe S.A. regularly welcomes students in order to help them discover the industrial world and the related activities and jobs. After a general presentation of the company, students are divided into several small workshops. For each workshop (welding shop, painting shop, assembly line, etc). activities, jobs and necessary skills are presented to the students. These visits give them the opportunity to discover different kinds of professional activities, and to improve their awareness of the required skills and consequently adapt their school training.



Getting a better understanding of operations in each process



Students of public universities visiting the factory

Participation in Professional Training

Amada Europe S.A. hosts professional training for the students of local technical high schools. Over the course of several weeks, firsthand experiences of real work situations help them to determine their professional course: a step forward in the direction of local industries development.

Amada Europe cooperates also with national industrial training organizations. Amada factory organized intensive training sessions for unemployed adults in order to foster technical skills adapted to local companies, and to give them the opportunity to have hands-on experience of some specific industrial jobs. These activities were reported by local newspaper articles.



Newspaper article report about professional training for technical high school students



Professional training for unemployed adults

Europe

India

AMADA UNITED KINGDOM

Internship Students welcomed at Amada UK

Amada UK organized professional training for internship students. In July, several school students spent a week at Amada gaining work experience, and three French apprentices joined the group for 3 weeks in October. A student with severe Asperger's syndrome spent a week at Amada on Work experience. Staff took special Care to ensure the placement fitted with his special needs.



The three French apprentices

Cooperating with UK Skills Championship

Following the 2011 initiative, Amada UK offered support by providing machines and technical support to the UK Skills Championship held in 2012. The machines provided were the Laser Machine Quattro and the bending machine HFE-M2-5020. There were also service engineers on site to offer technical advice to the young skilled workers.

CSR activities



AMADA NORTH AMERICA

Hosting MCIP Awarding Ceremony

Amada North America hosted the Manufacturing Internship Recognition Event in December. Over 100 interns, manufacturers, corporate sponsors and local city officials attended. Ten interns received the MCIP Award and after the speech of United States Congresswomen, the participants could see 'real world' product demonstration with actual processing machines.



Amada Outline presentation during MCIP Awarding Ceremony



Participants looking at 'real world' production machines

Explanatory meeting to local community

Schaumburg Business Council held a meeting in April with the participation of more than 30 companies. The purpose of this meeting was to explain to prospective Businesses why Amada choose to locate in Schaumburg.



Council session hosted in Schaumburg Solution Center



AMADA AMERICA

Program for interns

Amada America offers training courses as a cooperate initiative with professional training programs held in Northern Illinois. In 2012, the company welcomed 10 manufacturing interns as part of this Work Force Program. Interns took part in the design, programming, and production of a sheet metal part.

The purpose of the program is to interest young people in manufacturing as a career, to understand the evolution followed by high-level manufacturing technologies and the role of the company in the manufacturing industry.



Students discussing after the presentation



Students observing a machine in operation



AMADA TOOL AMERICA

Participated in an open house at a vocational school

In May, AMADA TOOL AMERICA participated in an open house at a vocational school. Students observed and interacted with sample parts. Parents and students came and listened to the staff promote the value of a Machine Shop class.



AMADA SOFT INDIA

Opening sheet process lectures at an Indian University

In March and September, the Institute of Technology of Madras hosted sheet metal processing lectures which were attended by engineers, management staff and students. The first and second lecture sessions had 25 and 37 attendants, respectively. After classroom lectures, participants were invited to operate the machines in Demonstration areas and experience the processing of sheet Metal to be used in building automatic vending machines and dust boxes.



Lectures on sheet metal processing



AMADA INDIA

Donation of a machine for an Indian University

A punching machine AE-255NT and a bending machine RGM2-3512, together with an AP100 automatic software were donated to the *Jabalpur Indian Institute of Information Technology*.



Machine donation with certificate

—With our employees —

 **AMADA EUROPE S.A.**

Sensitive employees on Quality, Health & Safety at work

In order to determine the hazards linked to real work, AMADA EUROPE performs risk assessment on all activities, and, based on the results of these assessments, establishes an easily understandable management system, consisting of symbols and color codes, in order to maintain appropriate health and safety for the employees. Task-specific bulletin boards (red for safety, green for environment, blue for quality, etc.) are used together with various symbol marks in order to reinforce the message and information impact on employees.



Display of directions and information calling for attention

Fostering environmental management system

AMADA EUROPE analyzes the impact of products and equipment in order to assess to what extent the activity of the company generates wastes, air and water pollution, as well as the consumption of resources, and implements measures and action programs aimed at alleviating the ecological impact of our operations.

Based on our management system, we implement all possible measures and actions in order to minimize the environmental footprint of each of our activities and to contribute to the protection of our environment.

 **AMADA OUTILLAGE**

Site visit for staff families

Organization of a site visit at AMADA OUTILLAGE for staff family, attended by 120 participants. During this visit, various machinery and manufactured products were presented.

 **AMADA TOOL AMERICA**

Staff families communication event

The company sponsored a family picnic at a local amusement park. It was attended by 95 employees and their family members. The 95 attending employees and their family members spent a very enjoyable time.

 **AMADA INTERNATIONAL INDUSTRY & TRADING (SHANGHAI)**

Hosting a staff family communication event

In May, staff and their families took a bus ride to an amusement park to enjoy an attraction show organized by the company. The children enjoyed the show, and the families became more deeply acquainted with each other.



Family communication event hosted in the amusement park

—Other CSR and Charity Initiatives —

 **AMADA TOOL AMERICA**

Donation for Deprived Children

Conducted a toy drive at Christmas time. Employees donated about 75 new toys for underprivileged children. Welfare organizations distributed the donation to families in deprived areas.

 **AMADA UNITED KINGDOM**

Donation to Cancer Treatment Support Organization

Amada UK employees raised £1,250 in one year for Cancer Treatment Support Organization.

With our customers

In a bid to grow with our customers, the Amada Group makes social contributions by providing solutions for product creation.

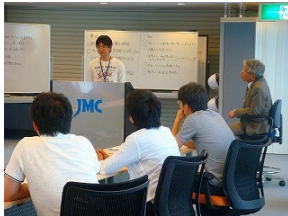
Nurturing the next generation

◆ Junior Management College

For 30 years now, the JMC (Junior Management College) program has been broadening managers' horizons while equipping them with practical management knowhow. Consistent with its motto of "studying real cases and learning through experience", the program's educational approach relies not on passive learning but rather on having students use their own knowledge and engage in reflection with their classmates to acquire practical knowhow through experience.

As next-generation managers, all the students are on an equal footing for the 22 days that they spend at the Amada Group dormitory in Oiso Town, Kanagawa Prefecture. Learning, eating and staying in the dormitory together, they contribute to each other's development by discussing their understandings of what being a next-generation manager means and the difficulties of this role.

The training program includes not only management tasks, Financial analysis and Labor management but also company PR presentations, Zen meditation, table manners and much more.



"Students expressing their opinions on the theme of "building a strong organization"

◆ General sheet metalworking course (6 months)

This general sheet metalworking course, lasting about 112 days, equips students with skills and knowledge from how to read engineering drawings to using the latest machines and software for actual processing.

Covering basics, applications and practical work, the course not only offers training on the machines and software but also leads to qualifications in safety training and other subjects.

Taking into account the constant need to stay abreast of the latest information on product creation and industry trends, the course also includes visits to leading companies and open exhibitions together with opportunities to experience different fields of manufacturing.

Precision Sheet Metal Technology Fair

Amada and the Amada School, which promote "total solutions," have been organizing the PRECISION SHEET METAL TECHNOLOGY FAIR since 1989, with the purpose of contributing to the development of the metal-fabrication industry, and also enhancing training related to technologies and skills.

The 25th awards ceremony was held in March 2013. This year saw a record 261 entries, of which 80 were from overseas.

For this year, the new Minister of Economy, Trade and Industry's Award was added. Honors went to excellent products in the five categories of One-piece Objects, Assembled Objects, Advanced Welding, Formative Arts and Student Work.

One of the Amada School's missions is to "nurture skilled workers." We believe that manufacturing will lead to nurturing skilled workers, and we would like to contribute to human resource development through this Fair.



Assembled objects category:
Minister of Economy, Trade and Industry's Award winner



Advanced Welding category:
Minister of Health, Labor and Welfare's Award winner



Formative Arts category:
Japan Vocational Ability Development Association Chairman's Award winner



One-piece objects category: Nikkan Kogyo Shimben Award winner



Formative Arts category:
Gold Award winner



Student Participation
Gold Prize

Quality Assurance

The Amada Group is committed to assuring a 100% Running Guarantee to Amada customers based on the "Amada Group Quality Assurance Policy."

◆ The Amada Group Quality Assurance Policy

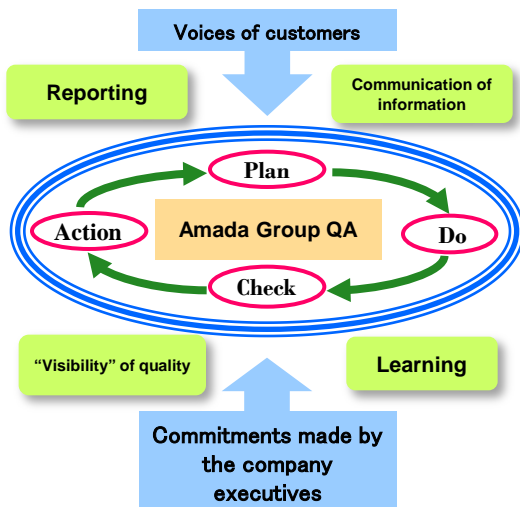
- ① The solutions and services the Amada Group provides globally will satisfy the customer expectations with regard to quality, and are reliable and attractive.
- ② The Amada Group will obey all laws and rules, and strive to continuously improve quality through PDCA.
- ③ The Amada Group will share information, review and check machines according to basic rules, and take proactive measures in order to prevent accidents.

◆ Amada's initiatives on Quality Assurance

The framework of the Amada Group's QA policy lies in the specifications / standards / criteria which incorporate the approach of the ISO9001 international standards. We will continuously improve and enhance quality through PDCA cycles, and pursue customer satisfaction while nurturing our "4 cultures."

◆ Global Quality Assurance

The Amada Group has established the "Global QA Committee" to resolve important quality cases for both Japan and overseas, and respond to global customers through problem solving and data control based on subcommittee meetings related to respective functional departments.



Service Parts Supply

As a responsible manufacturer, the Amada Group has established, and operates under, a system for promptly supplying service parts as long as customers' machines are running.

◆ Parts Center

The Parts Center started its operation in October 2009 as the core facility of our service segment including "before-service*." We are connected online with all our domestic customers, and our computer system, linked with our corporate system, is equipped to process all past maintenance data and a vast amount of daily service data. The service parts we have on supply consist of 1,000,000 pcs / 70,000 items. With maximum storage capacity of 1,300,000 pcs / 80,000 items, the Parts Center is the largest of its kind in the machine industry.

It is a 24/7 facility that supplies to global customers; its target is to improve the rate of immediate delivery to 98%, with urgent deliveries within one day for Japan, and two days for overseas customers.

◆ IT Service Vehicles

Since the start of Parts Center operation, we have introduced IT service vehicles with IT devices such as mobile computers and printers, and Amada's special package tools on board. In the past, we could only provide service at service offices, but now our service engineers are capable of viewing digital documents such as web parts lists and machine charts, checking the parts inventory and delivery schedule, creating quotations, and placing orders, all from inside the vehicles.



Amada Parts Center



Equipped with mobile computers and printers (IT Service Vehicles)



Bucket with IC chip inside, and picking cart with monitor (Parts Center)

* Before Service: creating machine charts for individual customer machines with service history, and changing the parts before the machine stops running, instead of after the machine stops from failures.

With our local community

The Amada Group participates in various community-contribution activities to foster effective communication with local communities.

Fujinokuni Eco Challenge Cup

The Fujinomiya Works Environment Dojo placed second in the CSR/Eco Office category of the Prefectural Volunteers' Fujinokuni Eco Challenge Cup, which was entered by about 1,400 teams tackling global warming in Shizuoka Prefecture.

Although about 140 companies and other organizations with bases in Shizuoka Prefecture entered the CSR / Eco Office category, the prize went to the Fujinomiya Works Environment Dojo in recognition of its unique staff development program. And the accompanying high level of environmental consciousness among our employees.



Fujinokuni Eco Challenge Cup award ceremony

Participation in Environmental Fair

The environmental fair sponsored by Fujinomiya City and Fujinomiya City Commerce and Industry Festival Executive Committee took place on 17th and 18th November. The latest edition of this five-yearly fair commemorated the 70th anniversary of the city's founding with nine different events held simultaneously, including the Commerce and Industry Festival, Environmental Fair, Citizen's Life Exhibition and Agricultural Festival.

Fujinomiya Works held booths at the Commerce and Industry Festival and the Environmental Fair. Videos, display panels and machining samples showcased Amada products at the Commerce and Industry Festival, while the company's environmental initiatives were presented at the Environmental Fair, with a section of our Environment Dojo (used for staff training) opened to the public and attracting interest from visitors.



Fujinomiya Works Environmental Fair

Isehara City Elementary School Vice-Principals' Association

After hearing from the Isehara City Public Elementary School Vice-Principals' Association that its members would like to learn about corporate human resources development, we held a presentation for them in a training room at FORUM 246.

Our presentation dealt with methods of human resources development and included details of Amada's residential training for new recruits. It was followed by an exchange of views on the challenges for schools and companies in fostering the development of young people.



Presentation on company human resources development for Isehara Public Elementary School Vice-Principals' Association

Ono City Research Forum

Our Ono Plant took part in the Ono City Research Forum, at which governments, companies and local associations present their research and initiatives, on October 17th. Presenting for the first time at this forum, staff from our Ono Plant described ISO 14001 and other environmental initiatives.



Presentation on environmental initiatives at Ono City Research Forum22

Ono Plant at the second Kita Harima Business Fair

The Ono Plant held a booth at the Kita Harima Business Fair on 19th and 20th October, displaying machining samples, saw blades and other items to inform visitors about Amada's business operations and environmental activities.



The Ono Plant booth at Kita Harima Business Fair

Plant Tours

The Amada Group encourages local schools and community groups to come to visit the premises. We will briefly outline some of them here.

◆ Elementary schoolers tour the Solution Center

Every year, local elementary school pupils visit the Isehara Works; in 2012 we were visited by 69 third-graders from the neighboring school.



Touring Isehara Works

◆ Fujinomiya Works Environment Dojo Tour

In October, we organized the first tour of our Fujinomiya Works for elementary schoolers. 37 fourth-grade elementary school students from Fujinomiya City came to learn about ecology by seeing the equipment at our Environmentally friendly laser machine-plant and visiting our Environment Dojo.



Touring Fujinomiya Works

◆ Ono Plant Tour

On December 7th, five prefectural high school third-graders toured Ono Plant to hear a presentation on our environmental initiatives and see our environment equipment.

This event was a public awareness Activity concerning Ono City's environmental accounting system.



Touring Ono Plant

◆ Toki Works Tour

In December, in conjunction with the regular Walking Event organized by Izuminishi Community Center in Izumicho, Toki City, 55 local residents visited our Toki factory and exhibition hall.



Touring Toki Works

Nagisa Festival

The Nagisa festival is held each summer in Oiso Town, Kanagawa Prefecture. Since Oiso hosts numerous Amada Group facilities including a company dormitory, we provide special support to this event. Featuring a summer concert and a fireworks display with about 1000 fireworks, the festival was a great way to escape from the summer heat!

Ono Cherry Blossom Festival

April 8th saw our third Cherry Blossom Festival, a social occasion for local people first held in 2009. It has been revived after being cancelled in 2011 after the earthquake.

Along with showcasing Amada's business operations and environmental activities, we handed out rhinoceros beetle larvae and flower seedlings. Proving popular with visitors (who requested that we hold it again next year), the festival was a great success.



Path lined with someiyoshino cherry trees



Concerts and other events took place

Support for the Oyama Uphill Marathon

Every year Amada provides special support to Isehara City's Oyama Uphill Marathon. This tough 9 km race from the north exit of Isehara Station on the Odakyu line up to the Lower Shrine at Oyama Afuri features a 650 m climb and 1,610 stone steps. For the 28th race, held on March 10th, 2012, there were a record 2,409 entrants from all parts of the country, with strong walkers competing in seven age/gender divisions. The presence of five world championship title holders and Olympic participants as guest runners added to the excitement.

On the day before the event, March 9th, we invited the guest runners to see our machines at the Amada Solution Centre.

Support for the Kanagawa Ekiden Relay

The Kanagawa Ekiden Relay is a race in which teams of seven representing 30 towns and cities in Kanagawa Prefecture compete over the seven legs of a 51.5 kilometer course from Hadano City to Sagamiko. This year Amada became a corporate sponsor of the event.

The Amada Group Clean-Campaigns

The Amada Group actively participates in regional clean-campaigns near to facilities and in local areas. Here are some of the clean-campaigns our group companies are taking part in.

◆ Riverside clean-campaign

In June every year at the Isehara Works, we take part in the annual river cleaning operations organised by the Isehara Environmental Protection Group, to improve the riverside along the Shibuta River which flows through the city of Isehara.

Amada employees and their family members (15 people from six families) took part in the clean-up on June 3rd, 2012.

◆ Isehara Works clean-campaign

Four times a year we run a clean-campaign at Isehara Works. Participants meet early in the morning before work starts and pick up trash along the road to the Works to help keep the locality tidy.



Isehara Works Riverside clean-campaign



Isehara Works clean-campaign

◆ Fujinomiya Works Lake Tanuki Walk

Every June at Fujinomiya Works, to promote the health of the employees and their families, we hold an approximately 4 km walk and trash clean-up around Lake Tanuki, a famous spot for viewing Diamond Fuji.

This year the walk was held for the 13th time, and about 150 people took part. The number of participants increases every year, while the amount of trash is showing a tendency to decrease. We'll be continuing the Lake Tanuki Walk and clean-up until we reach "zero trash".



Employees and their family members at the Fujinomiya Works Lake Tanuki Walk

◆ Ono Plant clean-campaign

Ono Plant held environment month clean-campaigns in June and December. A total of 120 people picked up trash and tidied up the area around the plant.



Tidying the area around the Ono Plant



◆ Toki Works site clean-up

To keep Toki Works tidy, all employees clean up and weed the site for 20 minutes during their lunch break. Some days as much as 360 kg (42 bags) of garbage and weeds are collected.



Lunchtime clean-up at Toki Works



◆ Kansai Technical Center clean-campaign

Clean-campaigns at Kansai Technical Center began in fiscal 2012. 82 people took part in the first clean-up, held in June, which collected a total of 42 bags (264.3 kg). As the area has become cleaner, less trash is being deposited on the roads near the Center, and the amount of trash collected is gradually going down. In the future we shall be continuing our regular clean-ups for the sake of the local community.



Kansai Technical Center's first clean-campaign



* Isehara Local Environmental Protection Group: A group made up of the City of Isehara and companies within it, with the aim of promoting environmental conservation in the local community.

With our employees

Amada values each of its employees, their families, and everyone associated with the company, and we are trying to become a better company through our activities.

Fujinomiya Works 25th Anniversary Celebration

To celebrate the 25th anniversary of Fujinomiya Works' opening, two days and a night of recreational activities were held at the site.

The main event was a sports day in which eight teams, each made up of staff from different divisions, faced each other in six exciting competitions including the centipede race and the tug of war.

Some of the employees who took part commented, "At first I felt a bit lost, but it was really fun and exciting" and "I had a chance to meet people from other divisions."



Employees taking part in the Fujinomiya Works 25th Anniversary Event



The aim of the team competitions is for employees to socialize with each other

Toki Walking Challenge

At Toki Works, we aim to foster the habit of regular exercise in our employees. To raise their awareness of the importance of exercise, we held the Toki Walking Challenge for five months from December 2012 through March 2013. Participants in the Challenge walked laps of the Works perimeter, a distance of approximately 1,630 m with a gradient of 9%, before work or in their lunch break. 24 employees took part, including 14 who walked 60 laps in this period, covering approximately 100 km.

Since the Challenge finished, numerous employees have been enjoying walking for exercise during their breaks or at other times.

My son and I enjoyed the tour!

Ayami Yamazaki
CUSTOMIZED FABRICATION SYSTEM DEPT,
Amada Co., Ltd. (toured Isehara Works)

I visited the works with my older son. I wasn't sure that he would behave properly with so many other people around, but the opening presentation about the company described the machines in a way that was easy for a child to understand, and he was very interested, watching attentively with a serious look on his face. In the exhibition room a smiling customer engineer handed him a free sample, and he listened carefully to the explanation about metalworking. He was very interested in a working machine, and even went up to it to get a better look.

Facility tours for employees' families

All of our facilities offer annual tours for employees' family members. These tours allow their family members to become more familiar with Amada, and are popular with our employees too.

◆ Isehara Works

A tour of Isehara Works took place on December 15th. Since the tour was held on a working day (Saturday), some employees took a paid holiday to join it. The event was well attended, attracting 166 visitors from 45 families.

The tour included not only the machines displayed in the Solution Center, but also the office with employees at work. There was a heartwarming scene here as employees' family members said "hello" to the manager.



A working machine attracts visitor's interest



Visiting the office during the facility tour

◆ Fujinomiya Works

This is the sixth time that we have offered a tour of the works, and for this occasion we decided to give the tour a different slant by showing visitors not only the factory but also other Amada Group facilities nearby. There were 29 Participants from 10 families.



Souvenir photograph of tour participants

Tour for family members

As the Works Tour was going on, my boss and colleagues were working quietly, and, despite looking a bit lost and nervous, my son went up to the manager's desk and tried saying "hello" with a bow, and so he was able to experience being in a real office. Then he happily sat on my chair, played with the computer keyboard on my desk and so on. My son got a taste of the atmosphere at work, and this workplace tour made a good impression on him!

After the tour a lovely dinner was provided for us, and my son and I ate everything on our plates! Being able to show my son a real workplace and the machines there was a very worthwhile experience.



Career training for fourth-year employees

Amada provides career training to fourth-year employees as an opportunity for them to take stock of their work to date and their skills, and develop future career goals. At the first career training session, held in fiscal 2012, a total of 84 people including Amada Group employees, divided into two groups, took part in two days of training.

With activities including team debates and English communication practice, the course was intended to equip employees with practical skills. A further aim was to have employees present their work to each other and reflect together on their work-related difficulties and future career goals.

In addition to improving their practical skills, the training gave participants an opportunity to review their skills and achievements to date, boost their motivation by seeing colleagues active in other areas who joined the company at the same time as they did and reassess their future career goals in depth.



English communication practice



Debate practice

Encouraging employees to take the Eco-Proficiency Test

At Fujinomiya Works, as part of our human resources development based on the *Amada Group Environmental Declaration*, we are encouraging employees to take the Eco-Proficiency Test. 69 employees passed the Test in fiscal 2012, bringing the total number of employees who have passed it to 209. Our target of 20% of our employees with a pass in the test has been exceeded, and every employee's environmental awareness is increasing.

We were happy to hear from employees who had taken the test that they could now understand environment-related terminology and news articles, or that they had realized why it was important to separate the different categories of trash.

In-house forklift truck operator certification system

At Toki Works, to eliminate goods handling vehicle accidents, we have incorporated an in-house forklift truck operator certification system into our health and safety training. Our certification system and test, based on in-house standards, supplement the forklift truck skills short course that must be completed at a certifying organization before an employee may operate a forklift truck.

Employees who have not completed the short course in forklift truck skills and passed the in-house forklift certification test are not allowed to operate forklift trucks. The practical test for in-house certification is very difficult, so candidates take it several times before they pass.



Company certification test in progress



Employee health management

◆ Policy on long working hours

To prevent health damage from long working hours, it is Amada Group policy that employees doing more than 80 hours of overtime or holiday work a month shall have a monthly health examination. As part of our rigorous health management for these employees, we check their level of fatigue and whether they are experiencing any physical or mental symptoms. If necessary, we then arrange for them to consult a company doctor or public health nurse.

◆ Mental health policy

We held mental health seminars for our managerial staff. The aim of these seminars was to provide managers with the basic knowledge that they need to have about mental health and to help them understand the importance of their mental health-related role, allowing them to recognize at an early stage any problems that their subordinates are having and respond to these effectively.

Initiatives for the prevention of fire

In response to the Great East Japan Earthquake that occurred on March 11, 2011, the Amada Group has reaffirmed the importance of day-to-day initiatives for the prevention of fires, and we are implementing training based on this.

◆ Major earthquake initial response training at Isehara

Together with Isehara Fire Department, we held general fire prevention training at Isehara Works on September 27th.

The main purpose of this session was to train employees how to respond immediately after a major earthquake.

Amada has its own firefighting self-protection organization, and area marshals are designated to lead the safe and rapid evacuation of each area in the event of earthquake or other disaster.

Prior to the training, we carried out a small-scale simulation exercise in which employees living within a 20 km radius of Isehara Works returned home on foot. We are trying to find out which roads employees who normally drive to work could safely use to get home in the event of a disaster, and looking at how their way of walking, hydration and nutrition would affect their safety on national highways that they would not normally walk on.



Roll call to check the number of staff present



Realistic evacuation training with smoke

◆ Fujinomiya Works March 15th Memorial Event

At Fujinomiya Works, we hold the March 15th Memorial Event to commemorate the magnitude six-plus earthquake that hit the Fujinomiya area on this day in 2011, causing extensive damage. In 2013 we presented an account of our experience at the Amada Fukushima Plant and our business continuity planning for Fujinomiya Works to staff at Disaster Response Headquarters. Also, we discussed the possibility of a large-scale eruption of Mount Fuji and, to convey a picture of the disaster that would ensue, Described the situation in the aftermath of such an eruption.



Training to deal with injured persons

◆ Fire, disaster and emergency response training at Ono Plant

We held disaster prevention and fire prevention training in December 2012. All 166 employees participated in the disaster prevention exercise, in which they practiced how to respond in the event of an earthquake. The employees waited until the vibration under their desks had diminished and then assembled in an open area of the plant. The event concluded successfully with a roll call to ensure that no one was missing.

120 employees participated in the fire prevention exercise. After listening to an explanation of how to use a fire extinguisher, they tried using an extinguisher to put out a real fire in an oil pan.

103 employees participated in an emergency response exercise based on the assumption that a container of waste oil had been overturned while being transported, causing the oil to spill. Participants practiced dealing with the spill, cleaning up colored water instead of oil.



Training to deal with a waste oil spill



Practical training on fire extinguishers

◆ Fire prevention and emergency response training at Toki Works

On March 5th, 25 members of the Disaster Prevention Division Firefighting Section and four staff from the General Affairs and Human Resources Division took part in fire hose training, during which they learned how fire pumps and other equipment work and how to use them. Also, a general first aid course was held for 24 members of the Disaster Prevention Division Rescue Section, and Toki City Fire Department provided practical training in first aid skills including use of the AED.

On November 20th and 22nd, about 150 people from relevant divisions took part in an emergency response exercise based on the assumption that waste water, oil and grease, paints or other pollutants had been discharged into a rainwater drain, and participants practiced using oil-absorbent mats and other methods to respond to the situation.



Practical training on a fire hose



Emergency response exercise: soaking up oil discharged into a rainwater drain

Personnel system

The Amada Group implements a stable salary upgrade system for young and mid-career employees.

We also have an assessment system for employees who have been newly appointed to management positions such as group leaders and managers, in which randomly picked bosses, junior staff members, and colleagues assess them “from 360 degrees”. This allows us to make fair and appropriate promotions.

Employment of persons with disabilities

The Amada Group is committed to the employment of people with disabilities so as to facilitate their social progress and independence.

For the four years prior to fiscal 2012, Amada Co., Ltd.’s hiring ratio for persons with disabilities exceeded the statutory hiring ratio of 1.8%. However, in fiscal 2012, this ratio fell below the statutory level to 1.75%. Unfortunately, Amada Group as a whole also did not achieve the statutory hiring ratio.

With effect from April 2013, the statutory hiring ratio has been raised to 2.0%. Henceforth, we shall intensify our efforts to employ persons with disabilities with a view to supporting their independence and fulfilling the Amada Group’s social responsibility.

Diversified employment system

At Amada, we have a reemployment system for senior employees based on employee evaluation during the two years before retirement (at age 60). The reemployed employees will work to pass on the experience and knowhow that they have accumulated during their employment to their junior associates, and to serve as role models for the younger generation.

We also have a “permanent staff appointment system” for appointing nonpermanent employees to a permanent status.

As for permanent employees, there are a variety of employment patterns available such as “special area” and “limited assignment” type permanent positions.

Global human resources development

To nurture and train human resources capable of competing in the world arena, the Amada Group holds the TOIEC test twice a year for any Group employees who wish to take it, and we cover expenses for employees who achieve scores in the middle range (460 to 660 points).

Also, we have just started providing new recruits to the company with 20 minutes per morning of English study time, and the Human Resources Division runs an English study group once a month to help new recruits improve their English level.

Rewarding work for a global employee

Amada made my dream of being a global business man come true!

Hello. I’m Ramires, a third-year employee at Amada. I’m from Brazil, and I came to Japan as a student in 2008. I majored in law, but I wanted to be a global businessman rather than a lawyer. Joining Amada turned my dream into a reality.

I’ve been working in Japan for only a short time, but I’d like to tell you about my experiences here.

During the company training for new recruits, I had difficulty because of the language barrier and other factors, but when I look back now, I think that I was really lucky to be able to learn about the machines and metalworking at my own pace.

When I was assigned to a division, at first I didn’t know how to talk to other employees of different ranks or to customers, and I wasn’t sure how to do the work I was given and so on. It was stressful, and there were times when I had to reflect on my failures.

Ramires Bourguignon Ferreira GLOBAL SPECIAL SALES DEPT. Amada Co., Ltd

However, these were valuable experiences, because they helped me to develop. I’m still not very experienced, but I’ve got quite used to life at the company, and I boast to friends and family in Brazil that I now know how to do my work.

Currently, I’m assigned to the Global Sales Division, where my duties are very wide-ranging and global in scope, including translation of documents, analysis of trends in related industries in Japan and overseas, showing visitors from overseas around, and providing support as a go-between for local subsidiaries and major companies expanding into new markets. It’s always a very rich and satisfying experience for me, and I’m looking forward to my future working at Amada.



Work-life balance initiatives

The Amada Group has drawn up a *General Employer Action Plan* to support employees with child-rearing responsibilities. In particular we are seeking to encourage male employees to take childcare leave by creating an environment in which such leave is easy to take. An environment that makes taking childcare leave easy for male employees will make it even easier for female employees. For this reason, we informed our employees about our "Childcare Leave Trial Pack", which allows expired paid annual leave days from the past ten years to be taken as childcare leave instead, and so in fiscal 2012, for the first time, one of our male employees took childcare leave.

In addition, we are creating an environment more conducive to childrearing by setting up a special leave entitlement for employees with a child under 15 (in compulsory education). This provides two days off from work per year (four days for those with more than one child) as "parents day leave" to make it easier for employees to attend sports days, open days and other events at their children's schools. Also, as part of our commitment to nurturing the next generation, we provide allowances to permanent employees (except those in executive positions) with children under 18, and these employees receive a congratulatory payment from the Employees' Association when their children enter elementary school, junior high school and high school.

Amada Action Plan (General Employer Action Plan)

We have formulated an *Action Plan* to make it possible for employees to balance life and work, and to enable them to work with vigor.

Period: October 1, 2012 to September 30, 2014

Objectives:

- ① Uptake of childcare leave by male employees (childcare leave to be taken by at least one male employee each year)
- ② Developing an environment conducive to childcare
 - Expanding Amada's own system
 - Amending Amada's system in line with changes in legislation
- ③ Developing an easy-to-work-in environment

Concrete measures:

- ① Review childcare leave in line with needs; use expired paid leave days
- ② Look into raising the eligible age for the system
- ③ Reduce overtime and encourage uptake of paid leave through "no overtime days" and company events held on working days

Childcare leave

Childcare leave strengthened my relationship with my family, and I'm grateful to my colleagues for it

Kunihiro Ikeda
SHEET METAL MACHINERY
ASSEMBLING DEPT. 2
Amada Co., Ltd.



When my wife was in hospital for the birth of our second child, both her parents and mine were working, which meant there was no one to look after our one-year and seven-month old boy. So,

after consulting my supervisor, I took childcare leave.

While on leave, I was busy every day playing with my son and feeding him, and this experience brought home to me how difficult life can be for a wife caring for children. Work is important, but I think that strong family relationships allow people to cope with work and daily life successfully.

My taking childcare leave did place a burden on the people that I work with, so I'm very grateful to them for understanding why I took it. In the future some of them will probably get married and have children, and I hope that this experience will make them think about the meaning of "family" and "colleagues".

A stronger team and better staff-management relationships!

Group Leader Kazuo Watai
SHEET METAL MACHINERY
ASSEMBLING DEPT. 2
Amada Co., Ltd.

In early March, Kunihiro Ikeda came to see me because he wanted to take time off work to look after his son while his wife was in hospital having a baby. When employees come to work with worries on their minds, the result can be problems with safety and quality, because the risk of accidents and product defects goes up, so I advised him to take childcare leave and stay home until his wife came out of hospital.

At our company, we regularly draw up group skills maps and encourage individual employees to improve their skills. So, when Ikeda was away, we found it easier than before to fill the gap left by a team member's absence, and at the same time cohesion in the team improved. Also, I feel that the staff-management relationship may have been strengthened.

So that staff can continue to feel free to come and talk to their managers, I'd like to work on creating a more open atmosphere at the workplace.

Our history of environmental activities

Amada has always deployed advanced environmental activities as a leading manufacturer of metalworking machines.

Amada and the environment

Amada has addressed the environment from the very early days of the machine industry, and it's been 14 years since the Isehara Works (where the headquarters is located) acquired the ISO14001.

We will introduce our history since the company was established, and our 13 years of environmental activities.

1948	JUN	Amada Seisakusho (limited company) founded		2003	SEP	Press announcement for "Amada designated parts for recovery system" (recovering used parts that include regulated chemical substances)	
1955	JAN	First contour machine born		2003	DEC	Press announcement for "Amada designated parts for recovery" system (recovering used parts that include regulated chemical substances)	
1961	AUG	Isehara Factory built in current Isehara City, Kanagawa Prefecture		2004	MAR	Wind power plant installed (for generating power for foot lights)	
1964	JAN	Company name changed to Amada Co., Ltd.		2005	FEB	Kyoto Protocol put into effect	
1969	APR	Headquarters relocated from Nakano, Tokyo to Isehara, Kanagawa		2006	APR	Press announcement regarding response to RoHS directive (EU's regulation on restricting the use of Hazardous Substances)	
	AUG	Joined the first section of Tokyo and Osaka stock exchange markets		2006	JUL	RoHS directive applied	
1978	MAY	Amada Machine Tool Plaza built as 30 th anniversary event		2007	MAR	Development Center and Laser Factory completed at Fujinomiya Works	
1979	APR	Headquarter building built		2007	JUL	Amada Eco Information Mark established (environmental information on products for stakeholders)	
1987	SEP	Fujinomiya Plant (currently Fujinomiya Works) established in Fujinomiya, Shizuoka		2007	SEP	Amada Eco Information Mark established (environmental information on products for stakeholders)	
1991	JUL	Clean Campaign activities started		2008	DEC	Ono Plant ISO14001 certified	
1992	APR	New Amada Machine Tool Plaza opened as 45 th anniversary event FORUM246 (training center) opened Software Center Building built		2009	JUN	Environmental report "Forest-In-Office" first issue posted on website	
1994	FEB	AMADA SFERA, symbol of Amada's environmental activities created		2009	OCT	Parts Center at Fujinomiya Works opened	
1996	SEP	ISO 14001 certification started		2010	APR	<i>Amada Group Environmental Declaration</i>	
1998	SEP	Product assessment manual established (assessment of products' environmental impact)		2010	SEP	ISO14001 group certification for Isehara Works, Fujinomiya Works, and Ono Plant	
	DEC	Isehara Works ISO14001 certified		2011	NOV	Opening of Toki Works in Toki-shi, Gunma Prefecture Conversion of Technical Center into a zero-carbon facility	
2001	OCT	Amada Eco Products certification system started		2012	NOV	ISO14001 group certification for Isehara Works, Fujinomiya Works, Ono Plant, Toki Works and Kansai Technical Center	
2002	SEP	Fujinomiya Works ISO14001 certified					

(green letters: global movement on the environment)

Independent opinion



Yō Takiguchi

Doctor of Engineering (specializing in sustainability management)

Professor, Shoin University Graduate School

Many companies who consider environmental preservation as a corporate social responsibility bringing contribution to society follow a PDCA cycle approach, determining management policies for such environmental preservation. In addition, many companies make these policies official, establish objectives based on these policies, and plans for achieving such objectives. They assess the results after implementation of the plans, then reconsider their policies based on the results. This PDCA approach can be called “Environmental Management”.

Having been asked to assess and study this year’s issue of “Forest-In Office” in details, I was able to verify that Amada Group actually implements true environmental management and that this management is maintained and improved every year.

On August 23rd, 2013, following last year’s visit, I visited the Amada Solution Center situated inside the Amada Group’s Isehara Works. A very detailed explanation given to me by the engineers in charge concerning five new machines made it clear that all these machines contain extremely advanced technologies that provide a much higher level of productivity while also bringing further energy and power savings, and expanding the variety of processes possible.

For these reasons, once installed in the site of the end users, Amada’s products are expected to operate with extremely high environmental efficiency.

My personal opinion after this visit is presented in the following paragraphs.



Checking energy efficiency and productivity improvements



Verifying changes and improvements compared to previous product generations



Checking machines in operation

1. Amada’s ACIES series were honored with the 55th Top Ten New Product Award, and the LASBEND-AJ model won the MM Award in 2012. From these prizes, we should note that the technological innovation levels of Amada’s products are “objectively” recognized in the machinery industry. ACIES machines received also the third “Kanagawa Award for the Prevention of Global Warming”.
2. As we can see through the list of awards page 10, we feel strong expectations from the fact that the Technical Center of Toki Works has been highly appraised by Japan’s Ministry of Environment for its use of renewable energy resources.
3. As we can see through Special feature No. 1 concerning ECO PRODUCTS, by introducing a fiber laser machine (FOL-3015AJ), users can reduce the power consumption of their machines in operation by 75%. This enormous saving is a wonderful achievement in terms of Life Cycle Assessment (LCA). There is no doubt that the users of this product can reach higher levels of environmental efficiency.
4. The development of eco-friendly products needs to go through very careful studies of the entire life cycle of the products, including design, production, usage and disposal. On that regard, we can highly appraise the fact that Amada Group is promoting two internal systems: the Product Environmental Assessment system and Amada ECO PRODUCTS Certification system.
5. New products certified as ECO-PRODUCTS this year, such as EM-ZR, EM-M2 and PCSAW-720, are deemed to contribute to the prevention of global warming through the shortening of processing times and reduction of power consumption. The success of the development of such products shows how efficient the internal systems established inside Amada actually are.
6. Amada group has already given serious consideration to the Extended Producer Responsibility (EPR) highly demanded recently in modern societies, and has established a product disposal accreditation system. Following this system, Amada grants certifications to specific contracting companies in charge of product disposal. Through this system, the company finalizes the life cycle of its products by checking the final stage of their life cycle.

7. The use of eco-ice goes further than mere electric bill savings because it can be considered as an efficient solution for averaging power consumption. We expect this solution to become a common practice in the future.
8. Though the definition of zero emission factory is very clearly and concretely formulated at the page related to the effective use of resources, no numerical target is given regarding the definition of a clean factory. In this respect, as no clear judgment standards are available, there could be some problems at the operational level of such factories.
9. Concerning the effective use of resources, as was the case in last year's report, three innovative technological improvements have been introduced. We consider these low-key efforts to be generators of technological advancements and that such accumulated efforts are the base that fosters the spirit of innovation.
10. Among the list of regulated chemical substances, some of them can be disadvantageous or harmful to the users and sometimes to the end consumers. In order to assure use of materials with low environmental burden, the company has established "Amada Group Green Procurement Guidelines" and strictly prohibits, at the manufacturing stage, the use of substances defined by RoHS, even if these substances do not fall into the Procurement Guidelines. This is an extremely conscientious corporate attitude, showing that the company is manufacturing in a very careful and safe way.
11. Apart from environmental preservation, Amada Group is devoted to fostering the protection of natural sites, as clearly mentioned on the page of the report concerning biodiversity. Amada gives consideration to forests, provides habitats for the animals therein, and works to preserve many kinds of living species.
12. On the page of the report regarding environmental accounting, the economic effects accompanying environmental conservation measures are reported strictly in terms of real effect profits; it is probably a good approach to consider the amount saved through energy savings due to equipment investment in economic terms.
13. "Forest-In Office" itself is a very important communication tool, but the relevant pages show clearly that this report allows a deep communication with the users of the products and with the local community. Additionally, this report is very effective for internal communication with the employees of Amada. As environmental initiatives usually involve a plurality of people in global actions, communication is essential.

■Editing Policy

This booklet is comprised of the environmental activities of Amada and the Amada Group companies in Japan, and is edited based on the "Environmental Accounting Guidelines 2007" by the Ministry of Environment.

This report is targeted toward various stakeholders, and it is edited so that the readers can understand Amada's environmental activities and social contributions with just this booklet alone.

■Reference

"Environmental Accounting Guidelines 2007" by the Ministry of Environment

■ISO 14001 certification

AMADA Isehara Works	Dec 1998
Fujinomiya Works	Sep 2002
Ono Plant	Dec 2008
AMADA MACHINE TOOLS CO., LTD.	Oct 1999

■Issues

2013 edition	Published	Sept. 2013
2014 edition	Scheduled	Sept. 2014
2012 edition	Published	Sept. 2012

■About the name "Forest-In Office"

"Forest-in" is a neologism created by Amada.

It does not mean an office inside a forest, but rather, it expresses that Amada would like to become like the forest itself. The term thus refers to Amada as "an office of the forest" that promotes activities that protects the natural environment.

■Area of coverage

Dates: April 2012 to March 2013

Organizations:

AMADA CO., LTD

Isehara Works	Ishida 200, Isehara-shi, Kanagawa
Fujinomiya Works	Kitayama 7020, Fujinomiya-shi, Shizuoka
Ono Plant	56 Hata-cho, Ono City, Hyogo

AMADA MACHINE TOOLS CO., LTD.

Headquarters	Ishida 200, Isehara-shi, Kanagawa
Toki Works	1431-37 Kitayama, Kujiri, Izumi-cho, Toki-shi, Gifu

AMADA TOOL PRECISION CO., LTD.

Ishida 200, Isehara-shi, Kanagawa

AMADA ENGINEERING CO., LTD.

Headquarters	Ishida 200, Isehara-shi, Kanagawa
Fukushima Plant	Minami Shimohara 81-3, Matsukawa-cho, Fukushima City, Fukushima

NICOTEC CO., LTD.

Headquarters	Ishida 200, Isehara-shi, Kanagawa
Miki Plant	Tomoe 45, Bessho-cho, Miki -shi, Hyogo
Urawa Plant	Tajima 9-20-1, Sakura-ku, Saitama-shi, Saitama

AMADA TOYO CO., LTD.

3-73 Sameganji, Yatomi-shi, Aichi

MIYACHI CORPORATION

95-3 Futatsuka Noda-shi Chiba

The background features a soft-focus image of green leaves on the right side, overlaid with several thin, curved lines in shades of grey and red. The overall aesthetic is clean and modern.

AMADA CO., LTD.

Environment / CSR Promotion Group, General Affairs Department

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