Forest-In Office

Amada Green Action

AMADA Group Environmental and Social Report





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Editorial policy

This content consists mainly of the environmental activities of AMADA HOLDINGS CO., LTD. and the AMADA Group in Japan, with reference to the Environmental Reporting Guidelines 2012 of the Ministry of the Environment. This report is intended for the various stakeholders of the company.

The report is designed to provide an overview of the environmental activities and social contributions of the AMADA Group.

Referenced guidelines

Environmental Reporting Guidelines 2012 of the Japanese Ministry of Environment

∎lssues

2015 edition	Published	Sept. 2015
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2014 edition	Published	Sept. 2014

■Scope of the content

Reporting period: Fiscal 2014 (April 2014 to March 2015)

However, some content from fiscal 2015 is also covered.

Relevant organizations: 16 domestic and 46 overseas companies

■About the name "Forest-In Office"

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

The AMADA Group seeks to be an office of the forest, rather than an office in the forest. It is used to mean an active 'office of the forest'.





Our Management Philosophy

1. Growing together 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 Declaration

AMADA Group aggressively promotes environmental activities to its management in order to realize sustainable development of its business and society. AMADA will help to build a bright and prosperous future for people around the world by optimally utilizing the engineering capabilities we have cultivated, and by providing environmentally-friendly, energy-saving products as a general manufacturer of metalworking machinery.

"Linkage through Eco-conscious Manufacturing"

AMADA Group aspires to become a business enterprise to link with customers, society and the world through eco-conscious manufacturing.

Producing eco-friendly machine at eco-friendly business establishment

All AMADA Group's operations are carried out with the aim of achieving optimal compatibility between environmental preservation and business activities through promotion of energy- and resource-saving efforts.

Our eco-friendly merchandise assists customers' to manufacture eco-friendly products

AMADA Group's eco-friendly products enable customers to manufacture energy savings and highly efficient products at their plants.

Creating eco-friendly environment at customers' plants

AMADA Group contributes to the creation of eco-friendly environments at customers' plants by utilizing its accumulated environmental know-how.



Creating Eco Products and Environmental Initiatives



Forest-In Office 2015

03









LC-C1AJ SERIES



Global environmental activities



-AMADA EUROPE S.A. (French manufacturing affiliate) Obtained ISO 14001 and OHSAS 18001 certifications

-Integration of AMADA MIYACHI Noda Works ISO 14001 certification -ISO 14001 certified offices

Japan Main 7 locations (Group certification)

Overseas 3 manufacturing centers Austria, France, China





SDE-1120

Won the Ministry of the Environment's 2012 Power Saving and Lighting Design Awards.











-Received the Environment Minister's Award for Global Warming Prevention Activity Technology development / product category (ACIES SERIES, FOL-3015AJ) -Awarded the Kanagawa Global Warming Prevention Award Grand Prize -Integration of NICOTEC Miki Plant ISO 14001 certification



Top Message

We are contributing to the global manufacturing and a better future of human being.



Chairman and CEO Mitsuo Okamoto

Recent Economic Environment Surrounding AMADA

In the global economy during the fiscal year under review, sluggish conditions continued in China and other emerging markets. Meanwhile, the U.S. economy remained steadily on a course for recovery, and signs of economic recovery continued in Europe as well.

In addition, the Japanese economy experienced a modest recovery, with the impact of the consumption tax increase waning and the economic and financial policies implemented by the Japanese government and the Bank of Japan working to firmly support overall economic conditions.

In the machinery industry, the effects of the depreciating yen resulted in favorable demand overseas. Also, subsidies and tax benefits for manufacturing in Japan provided incentives for capital investments, resulting in a strong performance for the industry.

Amid these conditions, AMADA constantly engaged in initiatives targeting technological innovation from the perspective of a creative solutions provider to the manufacturing industry.

We undertook these initiatives guided by our management philosophy of "Growing Together with Our Customers," and dedicated ourselves to providing a diverse range of solutions as a comprehensive manufacturer of metalworking machinery.

■SHIFT TO A HOLDING COMPANY STRUCTURE AMADA strengthens its management structure by establishing AMADA HOLDINGS CO., LTD.

In line with its business philosophy of 'Growing Together with Our Customers', the AMADA Group has been pursuing seamless innovation in response to a rapidly evolving global market, contributing through manufacturing (Monodzukuri) to a prosperous future for the human being.

The AMADA Group is also looking beyond its 70th anniversary in 2016 and its 100th anniversary. Believing that reorganization to create a stronger management structure is necessary both to achieve the continued growth envisioned for this next stage and to increase earnings through more effective Group management, AMADA has decided to shift to a holding company structure.

The shift to a holding company structure involved the division of AMADA's main business operations among three subsidiary companies.

About AMADA's environmental initiatives

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 product creation'. In line with the long-term 'AMADA GREEN ACTION' targets for FY 2020, we have committed ourselves to three major tasks.





1.Reducing CO₂ emissions associated with our products

Since the products of the AMADA Group are industrial goods, most of the CO_2 emissions during their life cycle come during their use. Consequently, we consider that creating high level energy saving "eco products" is very important. We have created many environmentally responsible products including a fiber laser machine with 80% less power consumption than older models, and combination machines with reduced power consumption that integrate production processes for increased productivity, reducing CO_2 emissions associated with our products.

2.Reducing CO₂ emissions associated with our business activities

The main manufacturing facilities of the AMADA Group pursue efficiency in business and manufacturing processes, implementing energy and resource saving and making constant and drastic improvements to reduce the environmental impact of our factories. Both our domestic and overseas sites actively undertake environmental activities. Austria has already obtained ISO 14001, and in addition to our blade factory in China, our machine manufacturing plant in France obtained ISO 14001 and OHSAS 18001 (occupational health and safety management system) in 2014. We will continue to implement environmental activities globally.

3.Conservation and regeneration of biodiversity

We are pursuing a variety of ecosystem conservation initiatives including tackling the challenge of creating an 'office in the forest' where workers and green space exist side by side at the Isehara Works, our national headquarters; managing the AMADA's Forest, an area of flourishing woodland on the site of the Fujinomiya Works, our main manufacturing facility; and caring for the growth of various trees every year at the Toki Works, to create an environment to attract wild birds and insects.

We will continue to focus effort on conserving rare species and work to preserve and restore biodiversity.



Businesses of AMADA Group

We contribute to the future of manufacturing industry with the strength of our group.

As comprehensive manufacturer of metalworking machinery, the AMADA Group is mainly operating in the sheet metal fabrication machine business, metal cutting machine and structural steel fabrication machine business, machine tool business, stamping press business, and precision welding machine business.

AMADA HOLDINGS CO., LTD.

AMADA HOLDINGS CO., LTD.

(Group strategy, management planning, etc.)

Sheet metal fabrication machine business -

- AMADA CO., LTD.
 (Sale and service of sheet metal fabrication machines)
 China sales companies
 ASIA ASEAN sales companies
- AMADA ENGINEERING CO., LTD. (Development and manufacture of sheet metal fabrication machines)
- AMADA TECHNICAL SERVICE CO., LTD. (Service of sheet metal fabrication machines)
- AMADA AUTOMATION SYSTEMS CO., LTD. (Manufacture the automation equipments for sheet metal fabrication machines)
- Metal cutting, machine tool business, and stamping press business
- AMADA MACHINE TOOLS CO., LTD.
- Precision welding machine business
- -AMADA MIYACHI CO., LTD.
- Overseas AMADA Group companies
 North American sales companies
 European sales companies
 Other overseas companies

AMADA Group companies in Japan



AMADA CO., LTD.

Sheet metal fabrication machine business

Sheet metal parts are used not only in cell phones, smartphones, clips and mechanical pencils we use every day, but also in traffic signals, elevators, and aircraft and rockets. AMADA's sheet metal fabrication machine business offers all solutions from machines through control software and peripheral devices to maintenance.

- Turret punch presses
- Press brakes

1....

10 U 10 U

- Welders
- Software

Laser machines





Machines to open holes and cut or weld thin sheets of metal (sheet metal) using a laser beam. Carbon dioxide lasers are often used for opening holes and cutting. A full line of oscillators is available for both fiber lasers (made in-house) and CO₂ lasers.







The machine is capable not only for cutting and piercing of sheet-metal but also, the forming such as extrusion and tapping that were done by other machineries.



EG 6013 AR

Sheet metal fabrication machine business



Machines for bending thin sheets of metal (sheet metal) between an upper and lower tooling. Also referred to as press brakes.

Welding machines





These machines use the short light wavelength and high absorption in relation to metals that characterize fiber lasers for welding various metal materials that are highly reflective or difficult-to-cut materials such as steel, aluminum and copper.









The metal cutting machine cut metal round bars and structural steel with band saw blade or circular saw blade.

The grinding machine is a machine tool

speed, and finishes up the structure

that rotates the grinding wheel in the high

DM 11

precisely.

SDEW3025



Machines for processing thin metal plates with toolings. Used in processes for manufacturing electronic components such as terminals, and products such as automotive parts that require drawing processing.

Precision welding machine business





These devices are used for fine welding of various metals using laser beams.

* Visit our website for detailed information about the AMADA Group's products. Website: www.amadaholdings.co.jp



Business Outline



Evolution of results

* Visit our website for detailed IR information. Website: www.amadaholdings.co.jp

The values above are as of the end of March 2015

Employee Data

Number of employees							
		2010	2011	2012	2013	2014	
	Global	5,899	7,956	7,678	7,956	8,083	





AMADA technologies are being used in these settings

Mostly, the processing for metal parts in these products are using AMADA Group's machines (Products).







Operating Tables

Medical Diagnostic Imaging Equipment X-ray



Medical Diagnostic Imaging Equipment CT, MRI





Environmental Management

Reducing CO₂ emissions associated with our products

The 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, procure-ment, 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.





The latest fiber laser technology is installed on the three-axis linear drive fiber laser machine developed as always optimum choice.

A fusion of the flexibility of the three-axis linear drive and the characteristics of the fiber laser, the FLC-3015AJ offers you new solutions as a next-generation standard machine.



Creating Eco Products

Since the products of the AMADA Group are industrial goods, most of the CO₂ emissions during their life cycle come during their use. Consequently, we consider that creating high level energy saving "eco products" is very important. We have created many environmentally responsible products including a fiber laser machine with 80% less power consumption than older models, and combination machines with reduced power consumption that integrate production processes for increased productivity, reducing CO₂ emissions associated with our products.





Product assessment system and AMADA ECO PRODUCTS certification system

The AMADA Group has put in place 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* at each step of the development process, the product environmental assessment aims to ensure that we do not supply products with a severe environmental impact.

The AMADA ECO PRODUCTS certification system is intended to appeal to customers as an evaluation of our products' environmental performance (energy efficiency) and improved productivity. Certified products are granted the AMADA ECO PRODUCTS mark.

*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 and request improvements as necessary.





ECO PRODUCTS Mark

The green color symbolizes the protection of the environment, while the mark depicts a new leaf bud formed from the letters 'E' and 'P' (standing for 'eco products').

Resource-Saving Machine: Indicates a machine that saves natural resources by consuming less oil, gas etc. than conventional models.

Low-Noise Machine: Indicates a machine that produces less noise during use than conventional models.

Energy-Saving Machine: Indicates a machine that saves energy by con-suming less power than conventional models.

Chlorine-Free: This mark indicates that cutting fluids are chlorine-free and do not contain chemicals controlled under the PRTR notifications. For consumables, we use the Eco Products Mark that reverses green and white.

72Models 62Models 62Models 46Models 2Models 2001 2011 2012 2013 2014 AE-NT SERIES FOL-3015AJ EM-ZR SERIES APELIO-255ECO LC-C1AJ SERIES The first machine certified

Development and commercialization of eco products Cumulative total



Eco Products at our customers

K.G.Y. Co., Ltd.



A manufacturing revolution for a low-carbon society

Establishing a new sector with the introduction of fiber laser machines

"Sheetmetal Machine & Soft" December 2014 Machinist Publishing



"K.G.Y. was established right after the war, in 1945, and since then we've conducted our business with a management philosophy based on honesty. Next year will be our 70th anniversary. Besides honing our precision sheet metal technologies, we are developing various shelf brackets and posts as our flagship product, selling them nationwide.

I'm glad to say, K.G.Y. is now gaining notice as a brand for shelf brackets and posts."

"In June 2014, we installed the first FLC-3015AJ fiber laser machine (2kW) in Aichi Prefecture. Compared with earlier laser machines, it reduces energy costs by one-third to half, enabling a manufacturing revolution towards a low-carbon society. We are developing original products that bring advances to industry that can contribute to society."

Low-cost processing through energy conservation and high speed cutting

with AMADA's in-house built fiber laser oscillator

- ①The fiber laser is simpler in construction and beam delivery than the CO2 laser. This means that the maintenance cost of its oscillator and optical parts is much lower.
- 2 The fiber laser is capable of high energy conversion. It is three times higher in energy efficiency the CO₂ laser. The power consumption is sharply cut. No need for warm-up operation and laser gas has resulted in a running cost reduction of more than 70%.





Electric Consumption



"Energy saving was the point of introducing the FLC-AJ"

Saving energy was the reason for introducing the FLC-AJ. With energy costs of one-third to half, no need for laser gas, and reduced maintenance costs for optical parts like lenses and mirrors, the total running cost is reduced by half. Also, in addition to stainless steels, the machine can process highly reflective materials such as aluminum, copper, brass and titanium, offering the possibility of expanding the scope of our work. Since the machine uses a 3-axis linear drive, the electrical charges are slightly higher, but because the fiber laser oscillator has a built-in semiconductor laser module, power consumption is small compared with older CO₂ laser oscillator, and the electricity consumption of the machine overall is significantly lower.

"Fast processing"

The FLC-AJ was processing 0.8 mm zinc plated steel sheets under customer's preset parameters. Analysis of the processing conditions had already been completed. Since it took two minutes to complete F1 processing of a single sheet for a product with multiple parts cut from 4 × 8' material, the workers were pressed to load the material on the shuttle table offline and sort the processed products.



Plant Manager Hirofumi Sekigami holding a product processed with a special material on steel sheet processed with the FLC-AJ



Eco product used by K.G.Y.

FLC-3015AJ+LST-3015F1

The FLC-AJ series of 3-axis linear drive laser machines is equipped with the latest fiber laser technology and has been developed for optimal suitability to a variety of factories and contexts. Introducing the fiber lasers, the FLC-AJ series provides 80% electricity savings.

"To be honest, in reality the workers are hard pressed by the machine. When they become proficient at processing, I think this will be the case even more.

Now we run the machinery for an average of ten hours a day, and the machine is stopped for about 30% of the time for preparation and so on. Actual operating time is about 60 to 70%.

With the FLC-AJ, we are using AMADA's remote support system which monitors machine information such as operating rate. This offers peace of mind in case of a sudden breakdown," (Sekigami Plant Manager).

"Precisely because it is a new processing technology, we don't stir up workplaces with by emphasizing depreciation alone. We want to build a good database and take pride in being a pioneer of fiber laser processing. Having the very equipment that the workers wanted has increased their motivation. It's a really enjoyable machine." (President Kageyama)

I was impressed that the company was taking the lead in environmentally responsible manufacturing (monozukuri) with the FLC-AJ, especially for a small-town factory.





processed with the FLC-AJ

company



- 2-dimensional CAD/CAM: AP100
- Nitrogen gas generator: PSA-5003H

Processing examples of typical workpieces

Productivity comparison with the conventional model

Processing time and running cost comparison per sheet



Material	AL5052
Thickness	1.0mm
Material size	1000×2000mm
Part quantity	12 types
Total quantity	38

Productivity Comparison Processing time reduced by 40%

	FLC-3015AJ 2kW	Conventional machine LC-F1NT, 4kV		
Processing speed	F27000	F8000		
Processing time	4min 42sec	8min 7sec		

Running Cost Comparison 75% cost reduction per sheet





Reducing CO₂ emissions associated with our business activities

Global environmental management system ISO 14001 certified offices

The AMADA Group conducts global environmental management at our main operation centers in Japan and overseas.



AMADA CO., LTD. AMADA MACHINE TOOLS CO., LTD. AMADA MIYACHI CO., LTD. AMADA TOOL PRECISION CO., LTD. NICOTEC CO., LTD. AMADA AUTOMATION SYSTEMS CO., LTD. AMADA HEALTH INSURANCE SOCIETY AMADA GENERAL MACHINE CO., LTD.

AMADA BUTSURYU CO., LTD. AMADA AI-LINK SERVICE CO., LTD. AMADA PLANTECH CO., LTD. AMADA DOCUMECH CO., LTD. AMADA LEASE CO., LTD.

(As of the end of March 2015)

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.



Processors are certified based on our standards related to area control, capacity, and various permits.



Significant results in improving plant reliability! AMADA EUROPE S.A. passed three management system audits

In 1997, AMADA EUROPE S.A. obtained ISO 9001 certification. From March 2013, the company prepared for ISO 14001 and OHSAS 1800, and as a result, obtained certification in November 2014.

While maintaining the existing quality management system, the company introduced two new management systems, which was very difficult. Nevertheless, the project team handled all the issues, and succeeded in obtaining certification.

Comment from Quality Control Manager, Agnès Quinterne

"It was a big challenge for us to incorporate the new environmental and occupational health and the safety management system while respecting the current quality management system.

Obtaining this certification is very good for the brand image of the AMADA Group. Also obtaining machines that are designed and manufactured taking into account worker protecting and environmental protection results in increased customer satisfaction."





The project team with Quality Control Manage Ms. Agnès Quinterne (center)

Environmental Management

Mid-term environmental plan

In order for the AMADA Group to undertake further environmental conservation activities, we established long term environmental targets for fiscal 2020 (AMADA GREEN ACTION, and we are now working to develop environmentally responsible products, achieve energy and resource saving, and reduce waste through improved efficiency in our business activities. For details, see Data (page 27).

The adoption of environmental accounting

From fiscal 2005, we introduced environmental accounting as a means of assessing the cost of our environmental conservation activities and the economic effect of environmental conservation measures, as well as to provide information useful for rational decision making for management and all our stakeholders.

For details, see Data (page 27).

Material balance

We quantitatively ascertain and analyze the physical impact of our products on the environment over their whole life cycle, using the information for environmentally responsible business activities. For details, see Data (page 29).

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%.

Eco Information Mark

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.





Achieving environmentally responsible workplaces

The main manufacturing facilities of the AMADA Group pursue efficiency in business and production processes, implementing energy and resource saving and making constant and drastic improvements to reduce the environmental impact of our factories. Furthermore, we regard the use of renewable energy to be an important theme, and we incorporate it actively in the design of new operation sites and plants.

Toki Works

Effective use of resources

Zero-emission factories

Zero-emissions is "a philosophy that aims for a society without waste, by recycling the waste discharged from a particular industry" and each company applies this by its own standards. AMADA Group'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." We have achieved zero emissions at three operation sites, Isehara (tooling factory), Fujinomiya, and Toki.



Steps towards achieving zero emissions at our plants

Chemical substances control

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.



Activities introduction

Assessing the energy saving effects of fiber laser machines in production processes

In order to verify the effectiveness of energy saving in the production process at the Fujinomiya Works plant, we continuously monitored the electricity consumption of the production processes of our fiber laser machines.

The results showed that the power consumption of each machine independently in the production process is 92% less than that of earlier machines (CO₂ lasers). In addition, we found that the electricity consumption of production lines using machines equipped with fiber laser oscillators is 33% less. We realized that in future, further energy conservation in our plants is possible by improving the production ratio of energy saving machines in the production line.



Fujinomiya Works Manufacturing line

Reduction of wood through custom materials handling for part delivery

Until now, wooden pallets were used for delivering large components to the Toki Works, which were wrapped in plastic to prevent scratching. Since the wooden pallets and wrapping plastics had to be disposed of each time, from May 2010, we worked with our suppliers to start deliveries with materials handling customized for the shape of the components. Thanks to this custom materials handling, we were able to reduce waste equivalent to 1600 kg of wood pallets and 410 kg of plastic in fiscal 2014.



Custom materials handling for chip transporters Prototype

After improvement

Environmental education of overseas Group local affiliated company trainees

At the Fujinomiya Works, we have established an Environment Dojo as a place for our employees to learn about environmental activities.

When local manufacturing staff from the Blair Plant in America visited the Fujinomiya Works for about one months' training, we showed them our environmental initiatives in the Environment Dojo so that environmental initiatives in Japan could be replicated globally.

The trainees from overseas were very interested in the materials showing how the environmentally efficient lifestyles of Japan's Edo period are being reconsidered today, and the introduction to life cycle assessment at the AMADA Group. Their interest focused on the fact that AMADA Group is a deeply eco-conscious company.



Overseas trainee education in the Environment Dojo



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.



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Conservation and regeneration of biodiversity

Fujinomiya / AMADA's Forest

Approximately 60% of the grounds of the Fujinomiya Works, or about 429000 m², is forest. And approximately 80% of them are artificial forests of "Japanese cypress." Since it has been 40 to 50 years since the trees had been planted, we are planning to aggressively improve the forest into a forest rich in plants and animals.



Our history of environmental activities





Indoor greening at the Isehara Works

At the Isehara Works, we are greening the interior of the operation site based on the concept of harmony between water, greenery and stone. To maintain trees inside, lighting is supplemented with metal halide lamps in the ceiling, while upward-facing lights in the ground supplement ground heat. Furthermore, we developed technologies such as creating a two-layer ground structure, improving the soil and drainage, and improving air permeability of the ground using pipes. In this way, we made it possible to maintain the trees with about one-tenth the amount of light normally required for trees, achieving the cultivation of Japanese trees that are difficult to grow indoors.



Indoor greening at AMADA Machine Tool Plaza

Planting shiitake to make effective use of thinned wood Fujinomiya Works

In order to make effective use of thinnings from the pin oaks on the premises, the cuttings are impregnated with shiitake spores and later, the mushrooms are harvested. The thinned wood from cypress and cedar which is not suited to shiitake cultivation is utilized as wood chips.





Employees impregnating thinnings with shiitake spores

Creating an environment to attract wild birds and insects Toki Works

At the Toki Works, we plant a variety of greenery every year to create an environment to attract wildlife.

We plant fruit trees to attract wild birds. In 2014, we planted strawberries, blueberries and plums around the biotope. It will take a while before they produce fruit, but they are growing well. To create an environment that attracts insects, we planted sunflowers, cosmos and herbs around the grounds. They also reward the effort by pleasing the eyes of the employees with their beautiful flowers.





SEP Japan Forming Machinery Association (JFMA) Eco Machine Project participation



Communication

Social contribution of AMADA Group



Children's sports activities Promotion AMADA UNITED KINGDOM LTD.



Professional training for technical high school students AMADA EUROPE S.A. (France)



Acceptance of factory tour AMADA EUROPE S.A. (France)

Luro



Sponsorship of Nikkei Hoshiaward AMADA CO., LTD.

With our customers

AMADA SCHOOL

The AMADA SCHOOL was established in 1978 as Japan's first vocational training corporation dedicated to metalworking machinery. As an educational institution, the school leverages AMADA's wealth of technology and cutting-edge facilities. The school is built upon the two pillars of skills education (manufacturing) and support education (personnel development) and teaches students about machines, CAD/CAM operation, and the fundamentals of sheet metal processing. In addition, the school offers preparatory courses for the National Trade Skill Test (factory sheet metal work) theory and practical examinations.

The school also provides courses with the goal of supporting human resources development for new employees, administrative staff, and supervisory staff at small- and medium-sized businesses as well as a support education course, Junior Management College (JMC), for those progressing to managerial positions.

Support for Sheet Metal Industry Associations

Training in AMADA India Vocational Center

Sheet metal industry associations are established in each region of Japan by companies involved in the sheet metal processing industry to promote the planning, proposal, implementation, and research of activities for the prosperity and global expansion of member companies. To date, 26 such industry associations have been established in Japan. To help improve the skills of all association member companies, train human resources, and promote industry development, AMADA provides assistance through the industry association secretariats and takes such measures as dispatching lecturers for workshops.



Precision Sheet Metal Technology Fair



Trade skill tests







Career day AMADA AMERICA, INC. (USA)



and volunteer work

AMADA CO., LTD.

Internship AMADA CO., LTD.



Support of U.S.-Japan junior baseball team exchange AMADA AMERICA, INC.

The Precision Sheet Metal Technology Fair

The Precision Sheet Metal Technology Fair is a competition established in 1989 by the AMADA SCHOOL to promote the improvement of sheet metal processing technology and skills. Currently, the school collects entries from five categories May each year and, following judgement, holds an award ceremony the following March.

The 27th Precision Sheet Metal Technology Fair awards ceremony was held in March 2015. 224 entries were submitted, of which 78 were submissions from overseas, with 36 submissions from students - the largest number of submissions from students in the fair's history. In addition to the existing Minster of Labour, Health and Welfare Award, the Minister of Economy, Trade and Industry Award, the Japan Vocational Ability Development Association Chairman's Award, and the Nikkan Kogyo Shimbun Award, this year, the Sheet Metal Expertise Prize was newly established, as well as the Judging Committee's Special Award and the AMADA International Technical Award. Furthermore, gold, silver, and bronze prizes were awarded to outstanding submissions in the sheet metal parts, sheet metal assemble parts, welding fabrication, formative arts fabrication, and student's fabrication categories.



The 27th Precision Sheet Metal Technology Fair awards ceremony

Prize winners



Minster of Labour, Health and Welfare Award winner



Minister of Economy, Trade and Industry Award winner



With our employees

AMADA's Human Resource Strategy

At AMADA, our management philosophy emphasizes the development of 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 resources development, and we believe that AMADA's unique corporate culture will be further developed by continuing to practice this philosophy. Guided by this basic philosophy, we have established our human resource strategy. The foundation of this strategy is the growth of our employees. This is achieved by having our employees accumulate a wide-range of experience through a rotation that includes on-the-job training (OJT) at the organization to which they belong and overseas transfers.

In addition, we work to raise the morale and motivation of new employees toward the Company by implementing in-depth educational activities in a friendly manner. In this way, we support the active role of young employees from the early stages.

Furthermore, we are also focusing our efforts on educating employees in managerial positions, as this type of education is necessary to lead young employees in the right direction. AMADA's management philosophy also promotes 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 our business activities, and strive to further enhance our corporate value while conducting ethically sound activities.

Developing global human resources

In order to make full use of personnel who can play an active role in the global marketplace, the AMADA Group makes abundantly clear that it is a global company and proactively hires talented and knowledgeable people, irrespective of their nationality.

Furthermore, since we believe that gaining experience of work overseas is a shortcut to acquiring a global outlook, we actively send young staff from sales, service, CE, development, production technology and other divisions on overseas postings.

Women's career support

It is recognized that there are few female employees in leadership roles in Japan today. The AMADA Group is working to hire women to fulfill roles in core positions, in development, CE and sales. Every year, several women with science qualifications enter the company, working in development and CE. In addition, we have many women from the humanities with excellent language skills, who are good at presenting at exhibitions and communicating with foreign nationals. We seek to give them a range of experience, including overseas postings. In addition, we will continue to provide an environment that enables women to carry on working through life events like marriage and childbirth, fostering a corporate culture that allows motivated employees to play an active role as a matter of course.

Diversity in employment

According to each individual's accomplishments at work, the AMADA Group provides a range of employment courses, promoting non-regular employees to regular employment, with options to stay in one place or one work assignment, and a prolonged employment system in which employees can stay on beyond retirement age.



At AMADA MAQUINARIA IBERICA



Training at the Head Office



A female employee gives a presentation





Promoting Support for Childcare

The AMADA Group is encouraging male employees to take child care leave by establishing an independent child care leave system, which differs from the original system by allowing employees who want to participate in childcare to redeem unused paid holidays that have expired.

Moreover, to encourage employees to take paid leave, in addition to systematic paid holidays and recommended days to redeem paid holidays, we have also established leave for special events, such as school-related events, which are separate from normal paid holidays. We also implement "Bring Your Family to Work days" at each of our work sites. Through initiatives such as these, we are working to encourage employees with children to play an active role in raising their children.

		Scope of coverage : Domestic subsidiaries				
Number of person who took the		2011	2012	2013	2014	
Childcare leave	Male	0	1	6	5	
	Female	7	7	10	9	
	Total	7	8	16	14	



Bring Your Family to Work day

A Workplace Where People with Disabilities Play a More Active Role

In order to assist the social progression and promote the independence of people with disabilities, the AMADA Group actively employs the disabled.

We provide trial employment for those with intellectual disabilities and offer work experience programs for students of special needs schools. These efforts help people with intellectual disabilities find work in the future. Furthermore, in June 2015, we established a special-purpose subsidiary within the group that exclusively employs people with disabilities, which is the first of its kind in the machine tool industry. This raised our employment rate for people with disabilities to 2.1%.

Safety Management

The AMADA Group is engaged in initiatives to prevent reoccurrence of any work-related injuries that occur within the group by identifying the cause and horizontally developing measures to prevent reoccurrence. In 2014, we continued to take initiatives that focus on safety education to eradicate injuries that result in lost work time.

AMADA EUROPE S.A. in France has introduced an occupational health and safety management system. In October 2014 it acquired OHSAS18001 certification and is making efforts toward the prevention of work-related injuries.

Employment rate for people with disabilities





Safety education for young Service Engineeer

Health Management

AMADA aims to quickly identify employees with health problems and provide them with follow-up support as part of its efforts toward thorough mental and physical health management. Accordingly, we are promoting such initiatives as the establishment of an industrial healthcare system and mental and comprehensive physical healthcare through collaboration with health insurance organizations.

Moreover, when an employee is injured or becomes sick, the group has in place an independently established sickness and injury leave system and a return-to-work program, which conducts follow-ups by healthcare staff.



Health promotion event



With our local community

Disaster prevention agreements with local communities

The Isehara Works has signed an agreement with Isehara City and Atsugi to provide facilities for accommodating people in the vicinity of Isehara Station and Hon'atsugi Station who are having difficulty returning home in the event of a major disaster (Agreement pertaining to facilities available for temporary accomodation in case of disaster). We stock drinking water, food, survival sheets and other disaster provisions, and in case of a major disaster, we will make them available to members of the public having difficulty getting home, as well as providing temporary accommodation.

Exhibiting at an environmental fair

The Fujinomiya Works takes part in the environmental fair organized by nearby Fujinomiya City. The AMADA Group booth features a range of materials on the AMADA's Forest, the FOL-3015AJ fiber laser machine, the AMADA Group's life cycle assessments and so on, giving visitors an opportunity to gain an understanding of the AMADA Group's initiatives for the environment. This is the sixth year that we have participated in the environmental fair, and the public is becoming very familiar with the AMADA Group. We want to provide more opportunities for interactions like these, to make the AMADA Group better known in the community.

Safety and disaster prevention initiatives

Each operation site in the AMADA Group has a covered hazardous material storage space for storing cutting oil used in the plant, gasoline pumps for company vehicles and forklifts, and other hazardous material facilities. Consequently, ensuring safety and disaster prevention is an important responsibility of the operation site, and we implement facility management and operation rigorously. Going beyond compliance with the legally defined standards, we have set voluntary management standards and conduct preventive maintenance of facilities, working to strengthen safety and disaster prevention so as to merit the trust of the community.

Emergency response drill or environmental protection

We conduct emergency response drill at each operations center using actual absorbent mats and so on, assuming scenarios involving leaks of effluent, oils and paint into rainwater ditches which would result in water contamination.

Establishing initial disaster responses and safety confirmation systems

At each operations center, employees take daily measures to ensure their safety in an earthquake, and conduct periodical drill assuming scenarios where a major earthquake occurs on a working day, to enable them act safely on their own initiative.

In addition, we operate safety confirmation systems using mobile phones, computers, landline phones and other regular means of communication to confirm the safety and whereabouts of group employees promptly during a disaster. We periodically conduct safety confirmation drill for all employees in the domestic group.

Received the Fire and Disaster Management Agency Commissioner's Award

The Isehara Works cooperates with the local government regarding safety management of hazardous materials, contributing to maintaining public safety, and in 2014, we received the Fire and Disaster Management Agency Commissioner's Award as an "outstanding operation site using hazardous materials". We are taking the opportunity of the award to further improve our hazardous material management system to prevent accidents.



Signing the disaster prevention agreement with Isehara and Atsugi Cities



Exhibiting at Fujinomiya's environmental fair



Disaster prevention drill Headquarters Isehara Works



Received the Fire and Disaster Management Agency Commissioner's Award



Third party opinion



Hideki Nakagome, Doctor of Engineering Professor at Graduate School of Chiba University (Speciality: Environmental energy research)

From this fiscal year, the service department in the flagship sheet metal business was transferred to the holding company AMADA HOLDINGS and the Group companies, but it has been spun off as AMADA TECHNICAL SERVICE. From the point of view of consumers like us, various manufacturers are using AMADA Group machines to manufacture their products, but the performance required of the machines can be expected to become increasingly advanced in future. For AMADA machines to meet these requirements as needed, the role of the service department is going to be very important, so I think spinning off the department and giving it an independent, self-supporting organization is a genuinely timely measure.

With regard to reducing CO₂ emissions associated with our products, AMADA is increasing the number of eco products shipped. But the ratio of total sales overseas exceeds that of domestic sales, so it is desirable to put greater emphasis on the environment in production not only for domestic operations but also at overseas sites. AMADA has established two systems for eco products, product assessments OK and the certification system for AMADA Eco Products. It must be difficult to meet these stringent conditions while still maintaining manufacturing cost restrictions and productivity, but I hope that the company will continue to implement the systems both within and outside Japan.

Concerning the reduction of CO_2 emissions in business activities, the company mentions passing the inspections of three management systems at AMADA EUROPE S.A. I very much hope that environmental management systems will be applied more extensively in Europe and China, and also at the company's North American locations in future.

The establishment of a product disposal contracting system and recommending the appropriate disposal of used products can be seen as recognition of the responsibility of a manufacturing company for its products, right up to disposal. Furthermore, a 99% reutilization rate at the disposal stage can be considered as a very high level achievement.

As part of the move to establish environmentally responsible operation sites, the Toki Works has solar power and thermal energy storage units for energy conservation, which is similar to initiatives at numerous other companies. However, there are few examples of introducing natural draft systems and geothermal systems in factories. I would like to see quantitative estimates for the energy saving and energy generating effectiveness of these measures.

In the section on effectiveness quantification of energy saving in production processes with fiber laser machines at the Fujinomiya Works, reducing packaging materials for product shipment at the Toki Works and other low-profile activities are likely to have a significant cumulative impact. Implementing these basic environmental activities steadily is important, and it would be good if the company continues to carry out similar activities at each operations center.

At the section where the conservation and regeneration of biodiversity are introduced, we can see that Fujinomiya, Isehara and Toki operation sites are undertaking unique initiatives. I hope the employees will take part in these activities voluntarily and experience for themselves stewardship of the natural environment and biodiversity.

In the area of communication, the company supports the AMADA SCHOOL, the Sheet Metal Fair, and the Sheet Metal Association, and although it is not mentioned here, the company has also made social contributions for many years through the AMADA FOUNDATION. For most people, metalworking is a rather unglamorous and indeterminate sort of genre, but I hope that the company will continue to raise awareness of this segment among children from elementary and junior high school, and women.

In the section on employee engagement, there are laudable initiatives such as the implementation of many systems including global personnel development, the promotion of women, diverse employment systems, support for childcare, and creating supportive working environments for people with handicaps. I hope that you will also establish daycare centers at your operation sites and take other measures to create a good working environment for women.

In the section on engagement with the local community, you explain the disaster prevention agreement with the local partners and the system for initial disaster response and safety confirmation. I assume that you will extend this from your own employees to include local residents. I hope you will consider establishing systems for strengthening your engagement with the community, such as opening the natural environment of your operation sites to local people.

From this report, I have the impression that in all areas, the AMADA Group seeks to contribute to society beyond the scope of a commercial organization. I hope you will take further steps in this direction going forward.



Detailed Data

Mid-term environmental plan

	Themes of activities	Medium term goals (FY 2017)	Goals for FY 2014
Preventing global warming	[Product Development] Contribute to the prevention of global warming by reducing CO ₂ emissions throughout the entire lifecycle of a product	Launch a series of products with reduced CO ₂ emissions in order to reduce the emissions of all our products by an average of 25% by 2020	CO ₂ reductions due to release of eco products (AMADA Group overall: -11.2%)
Prev global	Reduce CO ₂ emissions by reducing consumption of energy and resources	Prevent global warming through energy saving A reduction in energy consumption of 24.9% compared to benchmark year (2007)	- Year-on-year CO ₂ reductions in the AMADA Group: 4.2% (CO ₂ intensity target 0.838)
Effective utilization of resources	Contribute to our recycle-base society by promoting the efficient use of limited resources	 (1) Achievement of zero emissions in 6 facilities Maximum of 1% a year of landfilled solid waste (relative to total waste) AMADA Group to achieve zero emissions by 2017 	 Group zero emissions rate 1.63% (Compared with fiscal 2013 -5%) Maintain zero emissions at plants Initiatives towards achieving zero emission at plants
Effectiv of re		(2) Initiatives aimed at creating a clean factory - Activities based on our resource conservation roadmap) (Fujinomiya, Isehara, Toki)	 Reduction of product packaging material Reduction of cutting fluid Reduction of grinding fluid
ited control		Product development with green procurement (Reduce the use of RoHS directive chemicals)	 New products to be RoHS-compliant (90% green procurement rate) Proportion of unsurveyed on-the-market products not to exceed 15%
Regulated chemicals control	Bolster initiatives regarding management of regulated substances	Reduce the use of regulated chemicals Appropriately control chemical substances, and reduce their use within the manufacturing process (PRTR-4, VOC-5)	- Reduction of PRTR substances (thinner, paint)
Biodiversity	Preserve and regenerate biodiversity to pass on this country, which is rich in the blessings of nature, 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	 Implementation of biodiversity conservation plan activities Assessment of connections between business activities and ecosystems
Environmental Management	Respond faithfully to voices of stakeholders, particularly customers, to fulfill social responsibility as a	keholders, particularly customers, - Bolster waste disposal compliance (establish certification system)	
Envire Mana	company	- Implement environmental communication (Organize tours of plants and other facilities)	 Issue environmental and social reports Environmental communication CSR activities at each site

Environmental accounting

Unit: 1000 ye						
Environmental accounting items		2010	2011	2012	2013	2014
Environmental preservation cost	Cost	882,927	850,541	540,557	1,257,432	950,211
	Investment	5,325	263,759	8,207	1,233	36
	Total	888,252	1,114,300	548,764	1,258,665	950,247
Economic impact accompanying environmental preservation measures		31,516	35,479	23,403	32,640	26,485

Environmental accounting items		Unit	2011	2012	2013	2014
The material effects related to the environmental conservation policyCO2Waste	CO2	Tonnes of CO₂ per year	361.97	645.26	957.0	790.3
	Waste	Tonnes per year	50.35	22.84	57.5	16.0



FY 2014 Results	Goals for FY 2015
CO₂ reductions due to release of eco products (Overall: -10.0%)	CO ₂ reductions due to release of eco products (Overall: -17.3%, sheet metal machinery: -34.1%, stamping presses: -19.6%, machine tools: -5.6%, cutting: -9.9%)
- CO ₂ basic unit 0.838 (compared with the base year -16.2%)	Year-on-year CO_2 reductions in the AMADA Group (CO_2 intensity target value: 0,801)
 Zero emission ratio 1.586% (compared with fiscal 2013 -8.27%) Maintain zero emissions at 3 plants (Isehara: 0.025%, Fujinomiya: 0.227%, Toki: 0.033%) Establish reutilization and reutilization routes through rigorous material separation 	 Maintain zero emissions at plants (Fujinomiya, Isehara, Toki) Initiatives towards achieving zero emission at plants (Ono, Miki, AMADA MIYACHI, Fukushima) Zero emissions rate in the AMADA Group: 1.316%
 Reduce packaging materials for shipments (Fujinomiya) Reuse of cutting fluid (Toki) Introduction of grinding fluid purifiers (Isehara) 	 Initiatives towards achieving clean factories (Fujinomiya, Isehara, Toki) Waste reduction activities based on our resource conservation roadmap Continuous improvement of IN-OUT measures
- Ratio of RoHS-compliant new products 98.5% - Ratio of all unsurveyed commercial products 5.9%	 RoHS compliance rate in all new product types: 92% or more Zero unsurveyed commercial products
 Introduction and improvement of paint washer heat pump (Fujinomiya) Introduction of TX-free paint (Toki) Introduction of powder coating facilities (Fukushima) 	Initiatives towards reducing PRTR substances in paints - Expanded use of TX-free paints (Toki, Fukushima) - Reduction of solvent consumption (Fujinomiya, Toki)
 Greening, establishment of biotopes, use of thinned wood chips Assessment of connections between business activities and biodiversity 	 Activities based on the activity plan for AMADA Group biodiversity (Quantitative evaluation, AMADA's Forest etc.) Biodiversity Conservation Plan activities at each site
 Extension of scope of ISO 14001 group certification (Isehara, Fujinomiya, Ono, Toki, Kansai TC, Miki, Noda) Implementation of EMS at overseas manufacturing affiliates (AAG, AESA, Lianyungang, Qingpu) Obtain ISO 14001 certification AMADA EUROPE S.A. (France) 	 ISO 14001 consolidation (AMADA AUTOMATION SYSTEMS) Obtain ISO 14001 certification AMADA SHANGHAI MACHINE TECH CO., LTD. (China) Reduced environmental impact at AMADA stakeholders
 Issue environmental and social reports "Forest-In Office 2014" (Japanese, English and Chinese) Tours of plants and other facilities (Isehara, Fujinomiya, Toki) Active participation in community beautification activities 	- Issue the FY 2015 environmental and social report - CSR activities at each site

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

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



Material balance

<Domestic>









<Detailed Data>

		2010	2011	2012	2013	2014
CO₂ intensity	Isehara Works	0.0386	0.0340	0.0375	0.0384	0.0356
	Fujinomiya Works	0.2194	0.1645	0.1776	0.1709	0.1421
	Ono Plant	1.5527	1.4831	1.8145	1.6142	1.6490
	Toki Works	0.3693	0.4183	0.3480	0.2639	0.2114

		2010	2011	2012	2013	2014
PRTR-reportable chemical substances in tons	Isehara Works	0.0012	0.0011	0.0048	0.0049	0.0049
	Fujinomiya Works	63	70	50	44	52
	Ono Plant	2	0	0	0	0
	Toki Works	39	31	24	26	33

		2010	2011	2012	2013	2014
Amount of water resources used in 000s m³	lsehara Works	69	62	65	70	76
	Fujinomiya Works	65	63	73	77	65
	Ono Plant	7	9	9	8	7
	Toki Works	98	59	13	17	11

		2010	2011	2012	2013	2014
Impact on the aquatic environment (waste) in 000s m³	lsehara Works	39	36	43	44	44
	Fujinomiya Works	39	26	30	27	27
	Ono Plant	7	8	7	4	6
	Toki Works	94	54	8	7	8

<Overseas>







Scope of coverage: Greenhouse gases and water resources Overseas 46 companies Waste Overseas Main production centers



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