Environmental and Social Report

Forest-In Office 2021

AMADA

Data

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■ **Issues**
Published July 2021

■ **Scope of the content**
Reporting period: Fiscal 2020 (April 2020 to March 2021)
Relevant organizations: (Domestic data) 16 consolidated companies in Japan
(Overseas data) 67 consolidated overseas companies
*See notes on relevant page for each data set's scope of tabulation

■ **About the name "Forest-In Office"**
"Forest-in" is a neologism created by AMADA.
AMADA seeks to be an office of the forest, rather than an office in the forest. The term thus refers to AMADA as "an office of the forest" that promotes activities that protects the natural environment.

■Environmental accounting

AMADA Group 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 Group 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.

The scope has gradually expanded and environmental accounting is now implemented at eight bases in Japan, including the Ono Plant (from 2008), Fujinomiya Works (from 2009), Toki Works (from 2011), Miki Plant (from 2013), Noda Works (from 2014), Fukushima Plant (from 2015), and Suzukawa Works (from 2020)*.

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.

＊Suzukawa Works has started with summarizing the approximate leading environmental preservation cost and its effect so far.

Environmental preservation cost

Environmental preservation costs and expenses (￥695,835,000 JPY) in fiscal 2020 can be itemized as follows: research and development costs (￥496,556,000 JPY), business area costs (￥152,726,000 JPY), etc. The research and development cost, the largest in the breakdown, is calculated by integrating all the costs related to the models currently certified as AMADA Eco Products, as well as the development models newly applying to be certified as AMADA Eco Products. The main content is the cost of test material and jig production, and does not include expenses for experimental research or employee man-hours needed for development.

◆ Economic impact associated with environmental preservation measures

The main economic impacts for fiscal 2020 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.

Environmental Preservation Cost Unit: thousand yen

Item		Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020
Expenditure						
	Cost within the business area	148,134	141,126	114,996	172,877	152,726
	(Breakdown 1) Pollution prevention cost	38,722	50,770	20,242	33,796	31,532
	(Breakdown 2) Global environment preservation cost	21,286	18,441	13,167	34,622	35,683
	(Breakdown 3) Recycling cost	88,126	71,915	81,587	104,459	85,511
	Upper / lower stream cost	1,650	4,703	795	0	0
	Management cost	45,839	33,621	37,703	37,317	46,553
	Research and development cost	845,020	315,337	1,205,842	782,483	496,556
	Social activity cost	312	12	0	0	0
	Environmental damage cost	0	0	0	0	0
	Environmental preservation activity, etc.	66	1,460	34	12	0
Investment	Global environment preservation cost	33,827	15,526	18,019	1,400	636
Total		**1,074,848**	**511,785**	**1,377,389**	**994,089**	**696,470**

Environmental Preservation Effect

Item	Unit	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020
Economic impact accompanying environmental preservation measures	(thousand yen)	20,969	28,180	35,223	27,259	24,292
Material effects accompanying environmental preservation measures						
Reducing CO_2 emissions from all works	(t-CO2)	820.6	716.3	1,630.1	1,106.1	1,462.6
Waste	(t)	46.0	41.1	130.7	21.4	50.7

*CO_2 emissions are calculated based on the coefficient of emissions in each area in the benchmark year (2007).

Scope of tabulation: 11 key companies out of 16 consolidated companies in Japan

■ Material balance

<Domestic>

INPUT

Resources / raw materials
Metal 17,579 t
Nonferrous metal 0.5 t
Oil 125.1 KL

Chemical substances (PRTR substance)
Gasoline 7.3 KL
Paint 19.2 t

Energy
Electricity 57,692,000 kWh
City gas 904,000 m^3
Kerosene 437 KL
Others 194 KL

Water
Tap water 42,000 m^3
Underground water 205,000 m^3

Business Processes

Plan/DEV/design

Procurement

Production

Transportation/delivery

Use

Disposal/recycle

OUTPUT

Waste
Total Waste 3,004 t
Recycled waste 2,919 t
Final waste 17 t

Greenhouse gases
CO_2 27,461 t-CO_2
NOx emission 2.7 t
SOx emission 0.0 t

*CO_2 are calculated based on the coefficient of emissions in each area in the benchmark year (2007).

Impact on water environment
Total waste 74,000 m^3
BOD emission 3.7 t

Chemical substances
Waste 39.1 t

Gases emitted during transport
CO_2 2,754 t
(186,900,000 ton k*)

*Calculated with METI's revised CO_2 calculation method ton/kilo Alternative method B.

Recycling after product disposal
Metal 2,780 t

Products

Scope of tabulation: 11 key companies out of 16 consolidated companies in Japan

■ Detailed Data

		2016	2017	2018	2019	2020
CO_2 emission ($t\text{-}CO_2$)	Scope1	5,333	5,675	4,798	4,743	3,634
	Scope2	24,596	26,924	27,826	27,072	23,827
	Total amount	29,929	32,599	32,623	31,815	27,461
	Intensity	0.8405	0.8897	0.8524	0.8915	1.0378

* CO_2 emissions are calculated based on the coefficient of emissions in each area in the benchmark year (2007).

* Intensity is calculated as a weighted average of the ratio of improvement in comparison with fiscal 2007 for "CO_2 intensity", which is calculated by dividing the amount of CO_2 emissions by each location's quantity of activities that are closely connected with the emission of CO_2, such as production yield, production quantity, etc.

	2016	2017	2018	2019	2020
Volume of renewable energy (thousand kwh)	557.4	422.1	557.1	531.3	611.5

		2016	2017	2018	2019	2020
Air pollutant (ton)	NOx	0.40	0.99	1.23	3.90	2.70
	SOx	0.00	0.00	0.00	0.00	0.00

		2016	2017	2018	2019	2020
Waste (ton)	Total amount	3,548.2	3,421.0	3,789.0	3,580.4	3,004.4
	Recycled waste	3,281.4	3,193.7	3,618.1	3,320.5	2,918.8
	Final waste	63.1	37.9	36.0	29.1	17.0

	2016	2017	2018	2019	2020
PRTR-reportable chemical substances (ton)	75.8	67.3	90.2	58.7	39.1

	2016	2017	2018	2019	2020
Amount of water resources used (in 000s m^3)	174.3	154.2	229.5	152.9	246.5

	2016	2017	2018	2019	2020
Impact on the aquatic environment (waste) (in 000s m^3)	94.6	97.1	98.3	96.2	73.7

Scope of tabulation: 11 key companies out of 16 consolidated companies in Japan

< Overseas >

	2016	2017	2018	2019	2020
Greenhouse gases ($t\text{-}CO_2$)	18,110	20,388	16,274	19,753	17,520
Volume of renewable energy (thousand kwh)	–	–	–	2,908.9	2,928.0
Total amount of waste (ton)	2,512	2,643	2,757	2,516	1,851
Amount of water resources used (in 000s m^3)	103.1	106.5	115.7	162.2	119.8

* CO_2 emissions are calculated based on the coefficient of emissions in the benchmark year (2007).

Scope of tabulation: (Greenhouse gases) 54 key companies out of 67 consolidated companies in Japan
(Waste) 5 key overseas production bases

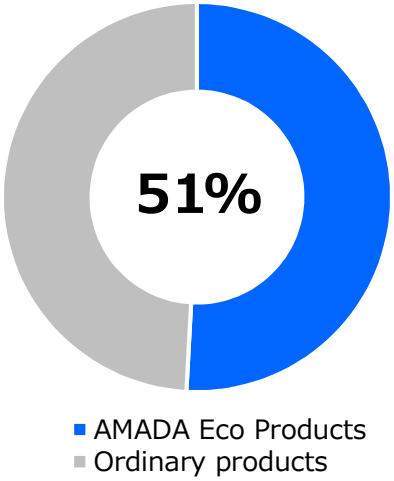
■ Parts designated for

	2016	2017	2018	2019	2020
Lenses	1,396	1,424	2,174	1425	1,835
Ion exchange resin	246	246	224	239	193
Recycling filters	1,124	1,016	974	942	750
Total	2,766	2686	3,372	2,606	2,778

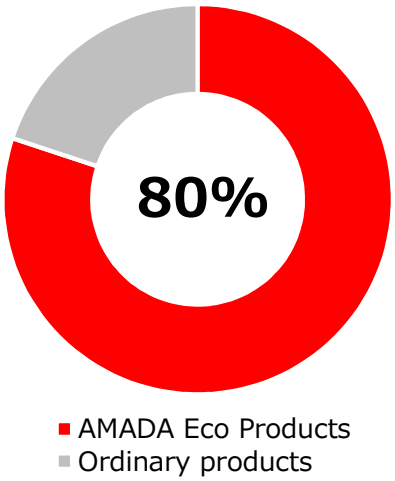
* AMADA's system for recovering parts designated for recovery: The AMADA Group's original system for recovering and properly disposing of parts containing substances designated as restricted chemical substances as our duty as a manufacturer

■ AMADA Eco Products

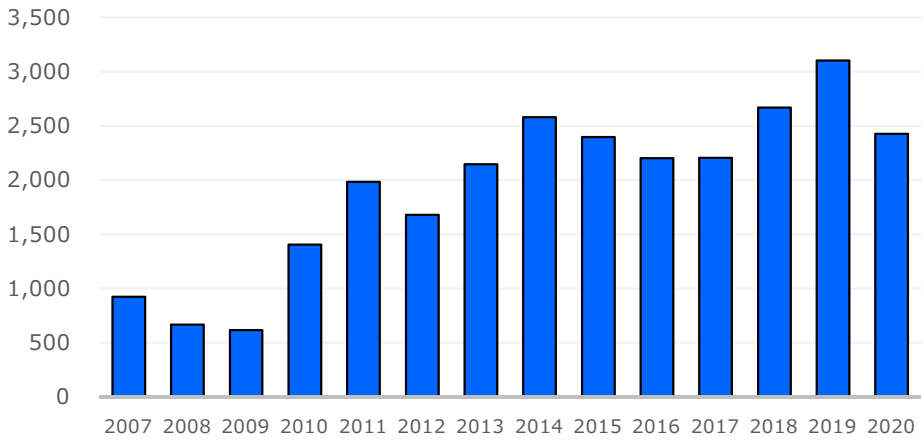
Fiscal 2020 ratio of AMADA Eco Products units out of total



Fiscal 2020 ratio of AMADA Eco Products sales out of total



Total unit sales of AMADA Eco Products
(in number of units)



Total unit sales and sales totals for Fiscal 2020 AMADA Eco Products

	Units	Sales total (¥million)
Eco Products (machine main units)	2,400	86,373
Non-Eco Products	2,300	21,506
Sum total	4,700	107,879

■ Response to Scope 3

◆Grasping the quantity of greenhouse gas emissions from business activities with regard to Scope 3

Japan's Energy Conservation Act requires companies to carry out management of their own direct emissions of greenhouse gases covered in Scope 1 (fossil fuels, natural gas, etc.) and indirect emissions covered in Scope 2 (electrical power, etc.). Scope 3 covers emissions from throughout the entire supply chain including "Scope 3 (other indirect emissions)" that were previously outside the scope of calculations—in other words, not only the company's own emissions, but also those occurring from their full range of business activities, upstream and downstream alike—and brings them within the scope of calculations.

It is AMADA's position that bringing visibility to the greenhouse gas emissions occurring from the full range of business activities, including the supply chain, is an important policy in reducing CO_2 emissions.

Value chain	Category	Item	CO_2 emission ($t\text{-}CO_2$)	Ratio
Upstream	**1**	Purchased products & services	81,993	49.3%
	2	Capital goods	46,007	27.6%
	3	Fuel & energy-related activities not included in Scope 1 or 2	3,952	2.4%
	4	Transport & delivery (Upstream)	2,754	1.7%
	5	Waste produced by business operations	5,453	3.3%
	6	Business travel	4,101	2.5%
	7	Employees' commuting	2,200	1.3%
	8	Lease assets (Upstream)	– (N/A)	—
Downstream	**9**	Transport & delivery (Downstream)	– (N/A)	—
	10	Processing of sold products	– (N/A)	—
	11	Use of sold products ＊	20,002	12.0%
	12	Disposal of sold products	– (N/A)	—
	13	Lease assets (Downstream)	– (N/A)	—
	14	Franchises	– (N/A)	—
	15	Investment	– (N/A)	—
Total			166,462	100%

※ This table displays the values for 15 categories (domestic) given on Scope 3, fiscal 2020.
However, the value for Category 11 "Use of sold products" is given under AMADA's own standard for sheet metal products, and the scope is limited to domestic sheet metal products. Sheet metal products include lasers, combination, welding, punching and bending machines, which make up 61.4% of the overall sales ratio.

■ Third Party Warranty

In order to enhance the reliability of the environmental data given in our report, we have obtained assurance by a third-party organization.

The target data and assurance standards for this certification are as follows:

Amount of CO_2 emissions from our 7 domestic business facilities (in Japan)

International Standards on Assurance Engagements: ISAE 3000 and ISAE 3400

* The target of this assurance report is p.03 and p.05's greenhouse gas emissions data.

SUSA
Sustainability Accounting Co.,Ltd.

Independent Assurance Statement

June 25, 2021

Mr. Tsutomu Isobe
Representative Director, President
AMADA CO., LTD.

1. Purpose

We, Sustainability Accounting Co., Ltd.; have been engaged by AMADA CO., LTD. ("the Company") to provide limited assurance on the Company's CO_2 emissions during the fiscal year 2020 from seven domestic business facilities (Isehara / Fujinomiya / Toki / Ono / Miki / Noda / Fukushima), that were 3.6kt-CO_2 (Scope1) and 23.8kt-CO_2 (Scope2) calculated by applying the actual emission factor of 2007 for electricity, and also 3.7kt-CO_2 (Scope1) and 25.6kt-CO_2 (Scope2) calculated by applying the latest adjustment emission factors for electricity to the seven domestic offices and sites of Orii and Mec Corporation, which became a consolidated subsidiary in 2018, respectively. The purpose of this process is to express our conclusion on whether the CO_2 emissions data were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the CO_2 emissions data. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

2. Procedures Performed

We conducted our assurance engagement in accordance with International Standard on Assurance Engagement 3000 (ISAE 3000) and International Standard on Assurance Engagement 3410 (ISAE 3410). The key procedures we carried out included:

- Interviewing the Company's responsible personnel to understand the Company's standards and reviewing the Company's standards
- Performing cross-checks on a sample basis and performing a recalculation to determine whether the CO_2 emissions data were calculated in accordance with the Company's standards.

3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the CO_2 emissions data have not been calculated in all material respects in accordance with the Company's standards.

We have no conflict of interest relationships with the Company.

Takashi Fukushima
Representative Director
Sustainability Accounting Co., Ltd.

■ External assessments

◆Rating in report by CDP

AMADA obtained a “B” rating in the “Climate Change Report 2020” compiled by CDP, a UK NGO. AMADA also obtained a “B-” rating in the “Global Water Report”. We will continue our promotion of climate change initiatives in the future along with our contributions to sustainable social development to match the expectations and trust of all stakeholders.

◆*REGIUS-3015AJ* wins the main award for *The 63rd Top Ten New Product Award*

REGIUS-3015AJ, a 3-axis linear drive fiber laser machine, won the main award for *The 63rd Top Ten New Product Award* (sponsored by the Nikkan Kogyo Shimbun Co., Ltd.). This machine is certified with “AMADA ECO PRODUCTS”, which actualizes both an energy saving feature and improved productivity; it is a machine that contributes to the reduction of CO_2 emission during the manufac

REGIUS 3015 AJ

◆*VENTIS-3015AJ* awarded for *The 55th Machine Design Award: IDEA*

VENTIS-3015AJ, a fiber laser machine equipped with LBC technology, was awarded *The 55th Machine Design Award: IDEA* sponsored by the Nikkan Kogyo Shimbun Co., Ltd. (every item on the awarded list this year was given the title of winner as the judging of actual products did not take place due to the spread of COVID-19). This machine is also certified with “AMADA ECO PRODUCTS”, which actualizes both an energy saving feature and improved productivity, and contributes to the reduction of CO_2 emission during the manu

VENTIS 3015 AJ

◆Acquisition of ISO 14001 certification

The AMADA Group has acquired integrated ISO 14001 certification for 9 of its operations centers in Japan. Overseas as well, the Group has acquired ISO 14001 certification for 4 of its production centers.

ISO 14001-certified operations centers	
Domestic (Japan) locations	Overseas locations
Isehara Works	AMADA AUSTRIA GmbH
Fujinomiya Works	AMADA LIANYUNGANG MACHINERY CO., LTD.
Toki Works	AMADA SHANGHAI MACHINE TECH CO., LTD.
Ono Plant	AMADA EUROPE S.A.
Miki Plant	
Fukushima Plant	
Noda Works	
Isehara-suzukawa Works	
Kawaguchi Works	

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