"Father Sun" Activities Annual Report 2014 KOA Corporation Site Report

KOA Corporation Company Profile (ISO14001 Registered Sites)

Earthwing (Minowa-machi Kamiina-gun)
 Ina Office (Ina City)
 Eastwing (Minowa-machi Kamiina-gun)
 Nishiyama Factory (Ina City)
 MINOWA Wing (Minowa-machi Kamiina-gun)
 Minowa Factory (Minowa-machi Kamiina-gun)
 Design, development, and manufacture of resistors, inductors, resistor/capacitor network, and circuit protection devices
 Design, development, and manufacture of resistors and hybrid IC
 Design, development, and manufacture of resistors, inductors, and circuit protection devices

Minowa Factory (Minowa-machi Kamiina-gun) Chuo Factory (Minamiminowa-mura Kamiina-gun) Takumi-no-sato (Iida-shi) Nanakuri-no-mori (Achi-mura Shimoina-gun)

: Manufacture of resistors : Design, development, and manufacture of resistors and circuit protection devices

: Design, development, and manufacture of multi-layer ceramics

Material flow for 2013 and undertakings for social environmental activities

AC	2013 Targets	Outc	omes and achievement (Level of achievement ©:100% o:More than 70% A:More than 50% ×:Less than 50%)
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	0	We maintained the status of causing no environmental accidents. The new factory, "Nankurinomori", has embarked on risk mitigation measures, such as making the treatment system of compressor drainage resistant to overturning and making improvements to prevent environmental accidents attributed to scribers.
11	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	Ø	We have engaged in a variety of activities, such as making design changes on existing products to reduce the amount of raw materials needed for production and the amount of wasted materials, promoting product downsizing, utilizing mothballed production equipment, and hosting technical seminars to introduce optimum methods of using our products.
111	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	Ø	Though taking actions, such as the reducing the sludge from effluent treatment, expanding the use of returnable boxes (that are used to carry products), and streamlining manufacturing processes, per-unit-of-production discharges have decreased by 15% from 2010 to achieve the goal.
IV	Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	0	Despite increased manufacturing output being a factor that works against cutting CO2 emissions, wasted energy containment measures, such as preventing air leakage, recycling excess heat, enforcing thermal insulation, and switching to high-efficiency systems, have enable the company to cut CO2 emissions per unit of production by approximately 21% from 2010 to achieve the goal.



"Father Sun" Activities Annual Report 2014 KOA ELECTRONICS CO., LTD. Site Report

KOA ELECTRONICS CO., LTD. Company Profile Location of Head Quarters : Anan-chou, Shimoina-gun, Nagano, Japan •Environmental Management Representative : President, Nakatou Yasuhisa JapanEstablishment : September 27, 1969 •Environmental Management Representative : President, Nakatou Yasuhisa Representative : President, Nakatou Yasuhisa •SO14001 Certification Number : 20001591UM (Registered in March 2000) Contact : Support Center, QC Group [T E L : 81-260-22-2261] Business Description : Design, development, and production of resistors [U R L : http://www.koa-electronics.co.jp]

Environmental Policy and Philosophy of KOA Electronics

KOA Electronics is a company, which manufactures electronic components (fixed resistors) in the land surrounded by rich natural environment of Nagano Prefecture. To learn the importance of nature by being close to nature and to maintain beautiful environment that people of future generations would also want, each employee is aware of the importance of nature and the responsibly of practicing the "Father Sun ("Environmental Management System") to build the bond of trust with the Mother Earth to ultimately create a model for perpetually circulating society.

Material flow for 2013 and undertakings for social environmental activities



	The topics for Tablet Sun Sualegy			
AC	2013 Targets	Outc	Outcomes and achievement (Level of achievement ©:100% Outcomes and achievement (Level of achievement)	
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	Ø	We have patrolled factories to raise employees' environmental awareness. Also we optimized the amounts of stored hazardous substances depending on demand levels for our products to alleviate the risks associated with environmental accidents.	
II	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	Ø	To stabilize the room temperature of manufacturing floor, in conjunction with switching to high-efficiency air- conditioners, we installed double-entry doors to lessen the burden on air-conditioners.	
111	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	Ø	The introduction of WEB-EDI purchasing system has enabled reduction of printing and power usage. Also, defect reduction activities have exceeded their goals to achieve the total defect generated of 75.6kg/ million pieces, which far surpassed the 85.65kg/ million pieces target.	
IV	Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	Ø	The introduction of production equipment graded to be highest efficiency and the switch to LED lighting, as well as the optimization of lighting layout, had the effect of cutting the CO2 emission by 4.7% for the year.	

Emissions and discharges total and per unit of production

CO2 emissions total and per unit of production from fuel combustion



"Father Sun" Activities Annual Report 2014 KASHIMA KOA DENKO CO., LTD. Site Report

KASHIMA KOADENKOU CO., LTD. Company Profile	
Location of Head Quarters : Nakanoto-machi, Kashima-gun, Ishikawa, Japan Establishment : October 15, 1984 Representative : President, Nomuki Kazunori	 Environmental Management Representative : President, Nakatou Yasuhisa ISO14001 Certification Number : JQA-EM0155 (Registered in October 2000) Contact : General Affairs Center
Employees : 125 (As of March 31, 2014) Business Description : Design, development, and production of resistors and	resistor/network 【 T E L : 81-767-76-1111 】 【 U R L : http://www.kashimakoa.co.jp 】

Environmental Policy and Philosophy of Kashima KOA Electronics

We have put up "Circulation", "Harmony", "Finite", and "Enrichment" as our corporate philosophy and building the bond of trust with our 5 stakeholders - "Shareholders", "Customers", "Employees and Their Families", "Local Community", and "Mother Earth" - as our corporate mission. We are blessed with rich natural environment at the foot of Mount Ishidou and with people known for having a rich sense of humanity. And by taking advantage of these factors, we are engaging in the manufacturing of electronic components knowing that we have much to learn by dealing with soil, water, and the sun on a daily basis to build the bond of trust with the Mother Earth as a responsible member of its ecosystem.

ith each employee respecting the circulation of life in the water system of our community, we will responsibly practice the "Father Sun" environmental management system to promote the preservation of biodiversity of our community to create a model for perpetually circulating society.

Material flow for 2013 and undertakings for social environmental activities

INPUT	Business Activity	OUTPUT
Crude oil equivalent energy consumption 994kL (Vs. last year : Up 3%)	Design, development, manufacture, and sale of resistors and other electronic parts (Products Vs. production volume of last year : Up 1%)	Emitted substances ·Reused : 26 tons ·Recycled : 61 tons ·isposed : 0.08 tons (Vs. last year : Up 302%)
Clean water 3,797m ³ (Vs. last year : Down 22%)	Product containing the amount of movement of the substances subject to PRTR 0.8 tons	CO ₂ emissions from fuel combustion 1,505 t-CO ₂ (Vs. last year : Up 2%)
Quantity of substances subject to PRTR contained in purchased materials 5.2 tons (Vs. last year : Up 4%)	(Vs. last year : Down	Quantity transferred Substances subject to PRTR •to the environment : 2.7 tons (Vs. last year : Up 9%) •to emitted substances : 1.7 tons (Vs. last year : Up 12%)

Cutting power during peak-demand times for summer months ~ Setting up a generator ~

With the demand for power being near capacity, Kashima KOA has been using a generator since 2011 to alleviate the power usage during peakdemand times of summer months.

The power for the generator is used for running air-conditioners. But to make this possible, construction work was needed to integrate the power circuits of air-conditioners and to switch the system. The use of generator

was controlled by monitoring the power demand situation. The use of generator successfully cut the power usage in 2013 by approximately 50kw.

For setting up the generator, to prevent by any chance the outflow of leaked fuel, we have built an oil fence to absolutely prevent environmental accidents.



AC	2013 Targets	Outc	omes and achievement (Level of achievement ©:100% o:More than 70% A:More than 50% ×:Less than 50%)
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	Ø	Maintaining zero environmental accident status. Preventative improvement measures on environmental impact were introduced on significant environmental aspects.
II	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	0	We have been promoting the switch to toluene-free solvents, the activities to reduce percent defective, and the re-examination of raw materials (to change to halogen-free, etc.) for existing products.
ш	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	Ø	Through waste fluid reduction activities, such as modifying processing methods of raw materials and changing solvents, we have successfully cut waste fluid in terms of per unit of production by 14% from 2010 to achieve our goal.
IV	Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	×	However, we failed to achieve our goal of 3% reduction on the per-unit-of-production CO2 emission by exceeding the 2010 emissions by 2%, due to CO2 increase factors, such as the transfer of production lines.



"Father Sun" Activities Annual Report 2014 SANADA KOA Corporation Site Report

TAMA ELECTRIC CO., LTD. Company Profile	
Location of Head Quarters : Fuchu Office / Fuchu City, Tokyo, Japan	 Environmental Management Representative : Director, Kitahara Yoshitatsu ISO14001 Certification Number : JQA-EM6864 (Registered in February 2000)
Sanada no sato / Ueda City, Nagano, Japan	Contact : Support Center Business Support Group
Sanada Factory / Ueda City, Nagano, Japan	【T E L : 81-42-364-8321 】
Establishment : January 31, 1935	【U R L : http://www.sanadakoa.co.jp 】
Representative : President, Sorimachi Akihiro	
Employees : 230 (As of March 31, 2014)	Tama Electric Co. Ltd. has changed its name to
Business Description : Design, development, and production of resistors	s, sensors, and varistors "SANADA KOA Corporation" on April 1, 2014.
Environmental Policy and Philosophy of Tama Electric	
Thanks to being blessed with rich nature of "pristine rivers ar	nd mountains of Nagano" and "water and greenery of Musashino" the

company was able to grow. We are engaging in corporate activities by not forgetting the blessings of the Mother Earth and the local community.

As we engage in the production of electronic components, we are learning through dealing with soil, water, and the sun on a daily basis and are committed to establishing the bond of trust with the Mother Earth by being conscious that we are just one member of all beings and creatures,

Material flow for 2013 and undertakings for social environmental activities

INPUT	Business Activity	OUTPUT	The
Crude oil equivalent energy consumption 1,819kL (Vs. last year : Up 6%)	Design, development, manufacture, and sale of resistors and other electronic parts (Products Vs. producton volume of last year : Up 4%)	Emitted substances · Reused : 0 tons · Recycled : 34 tons · isposed : 0 tons (Vs. last year : No change)	The new factor energy conser tubes" to utilize LED lighting. E
Clean water 7,288 m ³ (Vs. last year : Up 4%)	Product containing the amount of movement of the substances subject to PRTR 0.9 tons	CO ₂ emissions from fuel combustion 2,357 t-CO ₂ (Vs. last year : Down 10%)	sato, by impro energy source Going forward sato is plannin biotope using
Quantity of substances subject to PRTR contained in purchased materials 3.4 tons	1	Quantity transferred Substances subject to PRTR ·to the environment : 1.2 tons ·to emitted substances : 0.8 tons	further advanc activities in co preserving rich

The launch of the new factory "Sanada no sato" and its registration in ISO14001 multi-site certification.

The new factory "Sanada no sato" was launched on October 2013. As energy conservation features, this factory has incorporated "cool/heat tubes" to utilize earth thermal as secondary cooling/heating sources and LED lighting. Because of Sanada no sato being in a cold weather region, old factories used a lot of kerosene for heating during winter. Sanada no sato, by improving insulation of ceiling and wall, was able to switch the energy source from kerosene to electricity.

Going forward, Sanada no sato is planning to maintain piotope using spring water to further advance business activities in conscious of preserving rich nature.



AC	2013 Targets	Outco	omes and achievement (Level of achievement ©:100% O:More than 70% A:More than 50% ×:Less than 50%)
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	Ø	Through introducing the "Father Sun" activities in the new factory "Sanada no sato", we have taken preventive measures to avoid accidents stemming from our facilities and equipment, and checked the status of enforcing preventive measures in internal audits.
II	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	Ø	As the department in charge of product design improvements, new products development, production equipment improvement and quality improvement, we were able to reduce defects generated in our production lines to realize products and production processes with much less environmental burden.
ш	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	Ø	Our commitment to reduce the total discharge with meticulous sorting of generated waste and improved yield has enabled us to accomplish the per-unit-of-production discharged materials reduction target of 14% from 2010 results.
IV	Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	Ø	Through energy saving measures such as reducing the number of production equipment, reducing the number of air-conditioners by changing the layout for better space utilization, and fixing leaking air in piping, we have reached our target of cutting per-unit-of-production CO2 emissions by 7% from 2010.



KOA KASEI CO., LTD. Company Profile

Location of Head Quarters : Ina City, Nagano, Japan Establishment : July 12, 1968 Representative : President, Yamagishi Hiromichi Employees : 56 (As of April 1, 2014) Business Description : Design, development, sales, and production of woodwork and Styrofoam and cardboard packaging

 Environmental Management Representative General Manager of General Affairs Nakamura Shohii •ISO14001 Certification Number : JQA-EM0155 (Registered in October 2000) Contact : General Affairs 【TEL: 81-265-72-7264】

Environmental Policy and Philosophy of KOA Kasei

KOA Kasei is a company engaging in the production of Styrofoam packaging and cardboard boxes and woodwork products in the land blessed with rich natural environment of Nagano Prefecture. We are committed to learning the importance of nature through interacting with nature to preserve the environment, in which the people can live without anxiety, for the people of future generations. With each one of us being interested in the importance of nature to practice the "Father Sun (Environmental Management System)" responsibly, we are striving to preserve the biodiversity of our community and create a model for perpetually circulating society.

Material flow for 2013 and undertakings for social environmental activities

INPUT	Business Activity	OUTPUT	
Crude oil equivalent energy consumption 911kL (Vs. last year : Down 15%)	Design, development, sales, and production of woodwork and Styrofoam and cardboard packaging (Products Vs. production volume of last year : Up 4%)	mitted substances Reused : 0 .05 tons Recycled : 75 tons isposed : 0.4 tons Vs. last year : Down 0%)	Undertakings to reduce generated wastes ~ Reduced usage of stretch film ~ KOA Kasei has embarked on the reduction of generated wastes by reducing the amount of stretch film used to keep the stacked loads tight to prevent them from falling during transportation. The mission of the stretch film ends when the load arrives at its destination. In most cases, stretch film is recycled, but reducing the amount of the film
Quantity of substances subject to PRTR contained in purchased materials 8.6 tons (Vs. last year : Up 1%)	Product containing the amount of movement of the substances subject to PRTR 0 tons (Vs. last year : No change)	combustion 2,224 t-CO ₂ (Vs. last year : Up 9%) Quantity transferred Substances subject to PRTR •to the environment : 0.04 tons (Vs. last year : No change) •to emitted substances : 0 tons (Vs. last year : No	used helps to reduce generated waste. After conterring with logistics contractor to determine the necessary number of turns the loads have to be wrapped around, we were able to minimize the amount of stretch film we use to half of previous amount. By taking this action, we were able to reduce waste plastic we generate and the amount of film used by the contractor to raise the environmental awareness of both parties. Going forward, we will be promoting more activities to realize operations in harmony with the environment.

AC	2013 Targets	Outc	omes and achievement (Level of achievement ©:100% o:More than 70% A:More than 50% ×:Less than 50%)
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	Ø	Maintaining zero environmental accident status. We have installed drain treatment system for air-compressors to prevent and reduce environmental effects.
II	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	Ø	To print on corrugated cardboard boxes, we have to use a printing plate per a type of box. Prolonging the use of exiting designs eliminates the need to make a new printing plate. To allow the use of existing boxes even if the shape of product that goes into the boxes changes, we have proposed redesigned shock-absorbing materials to our customers to do away with the need to make new printing plate.
111	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	Ø	By requesting simplification of packaging of purchased materials, we have reduced the use (on a per-unit-of- production basis) of stretch film and packing paper by 31% from 2010 to achieve our goal.
IV	Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	Ø	Even though CO2 emissions from fossil fuel combustion increased 9% from last year, strictly managing the operation of boiler enabled us to cut per-unit-of-production CO2 emissions by 10% from 2010 to achieve our goal.



JAPAN ELECTRONIC APPLICATIONS CO., LTD. Company Profile

Location of Head Quarters : Tonami City, Toyama, Japan Establishment : May 26, 1984 Representative : President, Habano Ryuuhou Employees : 55 (As of April 1, 2014)

 Environmental Management Representative : President, Habano Ryuuhou •ISO14001 Certification Number : JQA-EM0155 (Registered in October 2010) •Contact : General Group TEL: 81-763-33-5700

[URL: http://www.jeacnet.com

Business Description : Manufacturing of Thick Film Wiring Substrate and Hybrid IC

Environmental Policy and Philosophy of Japan Electronic Applications

In this land where rich-in-nature Tonami Plain spreads, we are dedicated to preserve the environment for the people of future generations where they can live without anxiety. And we would like to preserve the biodiversity of our community and realize perpetually circulating society through promoting the Father Sun activities.

Material flow for 2013 and undertakings for social environmental activities

INPUT	Business Activity	OUTPUT
Crude oil equivalent energy consumption 324kL (Vs. last year : Up 3%)	Design, development, manufacture, and sale of resistors and other electronic parts (Products Vs. production volume of last year : Up 4%)	Emitted substances · Reused : 0 tons · Recycled : 18 tons · isposed : 0 tons (Vs. last year : No change)
Clean water 31,365 m ³ (Vs. last year : Down 45%)	Product containing the amount of movement of the substances subject to PRTR 0.3 tons	CO ₂ emissions from fuel combustion 478 t-CO ₂ (Vs. last year : Up 2%)
Quantity of substances subject to PRTR contained in purchased materials 6.9 tons (Vs. last year : Up 2%)	(Vs. last year : Up 12%)	Quantity transferred Substances subject to PRTR • to the environment : 2.1 tons (Vs. last year : Up 32%) • to emitted substances : 4.5 tons (Vs. last year : Down 14%)

Initiatives to reduce power consumption Lowered pressure setting of compressors

cut power use, we have replaced the air receiver tank, which helps to uce the pressure setting on the compressor. The air receiver tank es compressed air from compressor to absorb pressure fluctuations, ch enables stable supply of air to end sections of piping. Since our tank es not have a lot of capacity, we had been suppressing the effects of ssure variation by setting the pressure high.

solve this problem, we have purchased utilized idled large tank previously ned by a closed factory of a group npany. After making extensive difications in piping while conducting ensive tests on pressure fluctuations, we e able to lower the pressure setting, ch in turn reduced power consumption approximately 8%. We will continue to her improve efficiency and reduce power ge by improving the design of piping.



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The Topics for "Father Sun" Strategy			
A	2013 Targets	Outcomes and achievement (Level of achievement ©:100% O:More than 70% A:More than 50% ×:Less than 50%)	
I	No environmental accidents. : Execute prevention / improvement measures on environmental effects each fiscal year.	0	We have maintaining zero environmental accident status. As an accident prevention measure for the transport of waste fluid, we have repaired U-shaped gutter, which the wagon loaded with waste fluid has to cross, and installed a grating cover to reduce the risk of wagon rolling over.
II	Promote Kaizen (improvements) to realize operations in harmony with the environment and products/production processes with reduced environmental burden.	0	By reducing standby electricity of production equipment and by switching air-conditioners of factory floor to high- efficiency systems, we have realized manufacturing processes friendly to the environment.
11	Maintain the status of zero emissions and cut emissions and discharges per unit of production below 2010 results.	0	By introducing returnable boxes for printed circuit board and recycling system for washing solvents, we reduced per-unit-of-production discharges by 16% from 2010 to hit the target.
IV	, Reduce CO2 emissions from fuel consumptions by 2% from 2010 results.	0	We have installed air receiver tank to cut the power compressor consumes. Also improved utilization of parts placement process enabled reduction of per-unit-of-production CO2 emissions by 10% from 2010 to hit the target.

Emissions and discharges total and per unit of production

CO₂ emissions total and per unit of production from fuel combustion

