Bound to Innovate

New Frontiers of Innovation

Furukawa Electric Group
Sustainability Report **2012**

CSR Data Book

FURUKAWA ELECTRIC

Promoting Environmental Performance Indices: Products with Calculated LCA Values

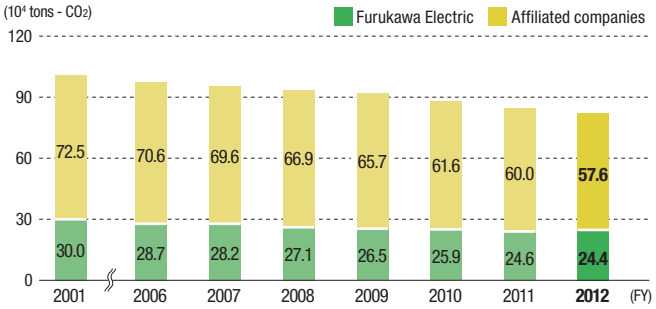
Furukawa Electric took steps to apply environmental performance indices to its products from fiscal 2010.
The environmental performance index quantifies product improvement against a standard model and expresses a product's environmental contribution by comparing its functional index (for example intensity etc.) and environmental impact (including CO2 emissions) over its life cycle.
In fiscal 2013, these activities will include 35 products. From fiscal 2013, in addition to their use as a management index and display on product catalogues, we will incorporate product category rules (PCRs) into the next medium-term plan as well as R&D activities.

Registration Status of Products for Which LCA Values Have Been Calculated

Company business division	Registered products				
	Fiscal 2011		Fiscal 2012		Cumulative registrations
Group total		18		22	40
Telecommunications Company	Single-mode fibers Small diameter 1000-fiber cable Fusion splicer, 1 type Optical amplifier, 1 type Super high-density ferrule Semiconductor laser module, 3 types Optical network units "GE-PON"	9	Large-diameter single-mode fiber preform Optical fiber ribbon Optical fiber cables Halogen-free wires Fusion splicer, two types Optical amplifier, two types Visible light source, one type Optical network units Optical amplifiers for CATV system	11	20
Energy and Industrial Products Company	Copper wire rods Green trough (Recycled plastic cable trough) EFCELL (Polypropylene sheet for stationery) AT tapes	4	Wrought copper wires F-CO tapes 6.6 KV Cold-shrinkable straight-through joint EFLEX (Corrugated hard polyethylene pipe) MC-PET (Microceller reflective sheet)	5	9
Electronics and Automotive Systems Company	TEX (Triple insulated winding wire) Heat sinks Aluminum alloy blanks for HDD Automotive terminal components	4	Enameled wires Wire harnesses Steering roll connectors	3	7
Metals Company	Copper strip products "EFTEC-97"	1	WS copper foils Au plated copper products Copper bus bars	3	4

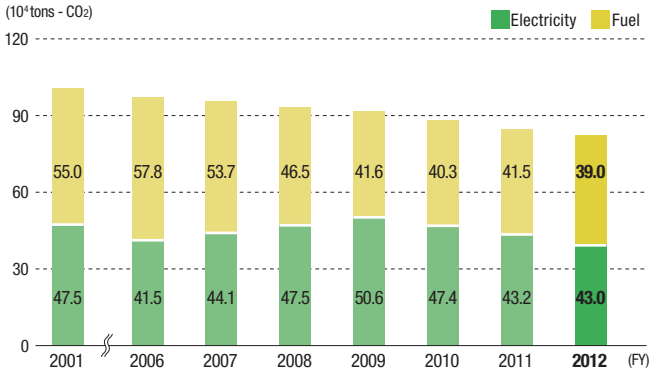
Reducing Greenhouse Gas Emissions

Greenhouse gas emissions

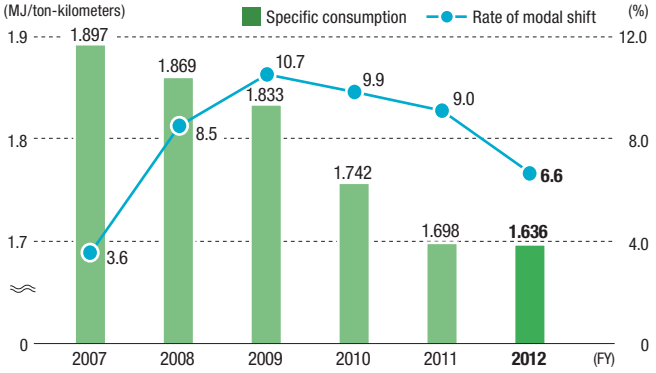


Notes: 1. The emissions coefficients of the respective power companies are used to convert power use volumes.
2. CO_2 emissions attributable to hydroelectric power are deemed to be zero.

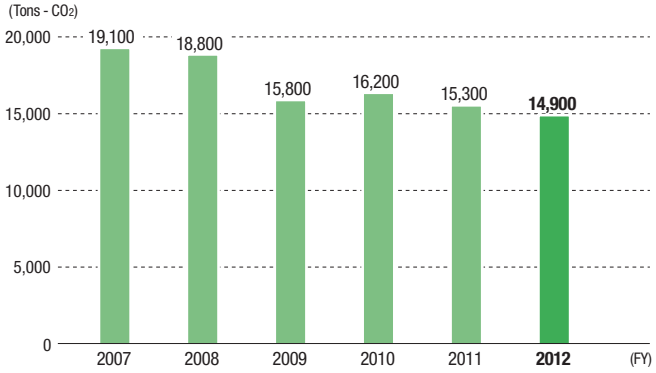
Greenhouse gas emissions (fuel/electricity)



Modal shift and specific consumption (Furukawa Electric)

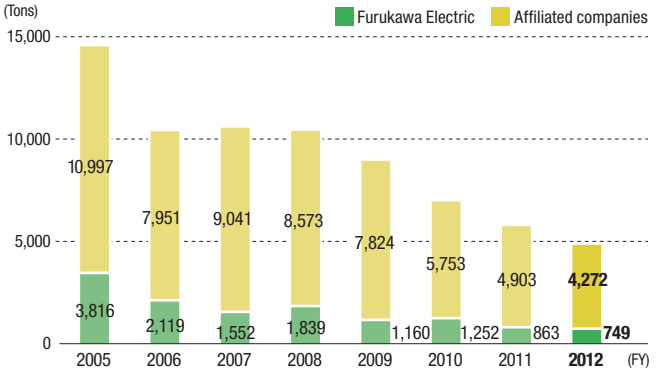


CO_2 emissions related to transportation (Furukawa Electric)

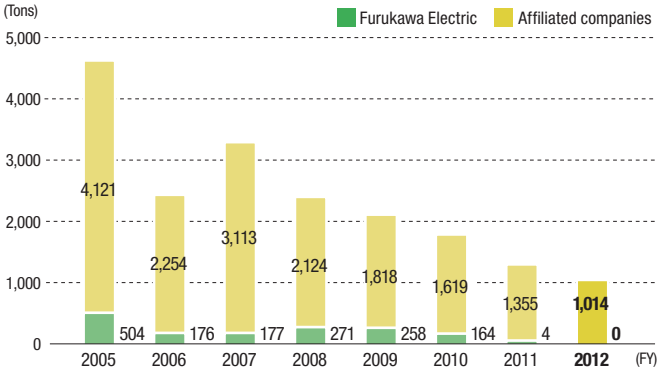


Zero Emission Activities

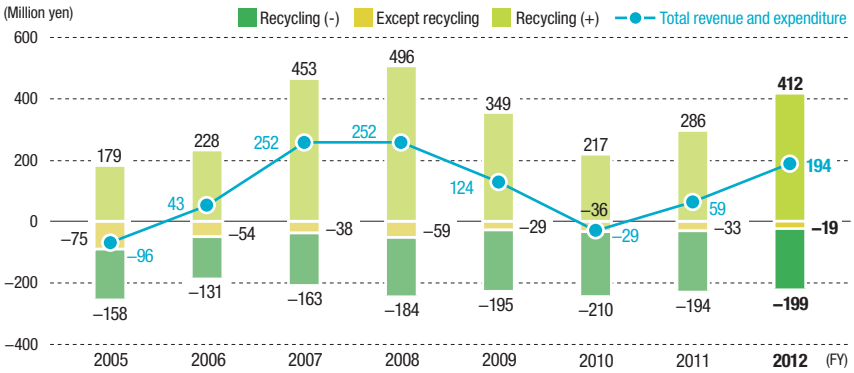
Non-recycled processed waste volumes



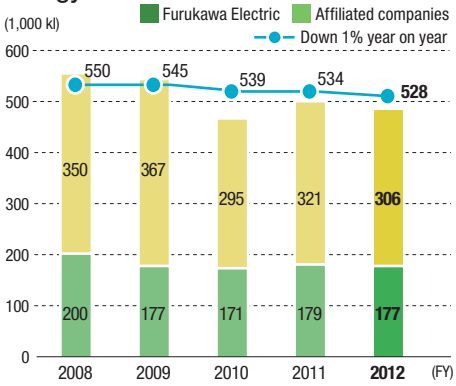
Direct landfill disposal



Waste disposal costs (Furukawa Electric)

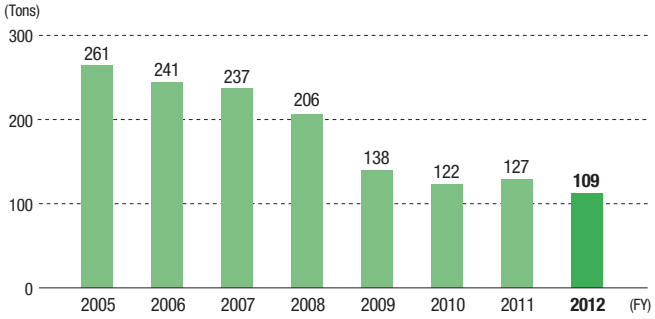


Energy use

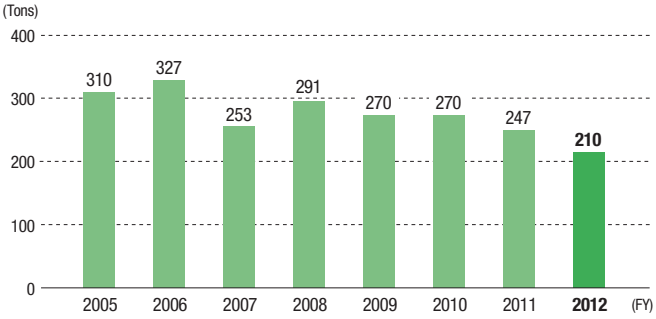


Chemical Substance Management Activities

Emissions of volatile organic compounds (For the overall Group, toluene and xylene)



Emissions of volatile organic compounds (Furukawa Electric)



Note: Volatile organic compound refers to the 118 such compounds (January 2012 issue) specified by the Electric Wire & Cable Makers' Association.

PRTR substances

Whole group

(Unit: ton)

Substance No.	Substance	Volume handled	Volume released	Volume transferred	Volume neutralized
1	Zinc and its compounds	6.1	0.1	0.6	5.4
31	Antimony and its compounds	298.8	0.0	0.9	297.8
53	Ethylbenzene	102.7	1.6	9.9	91.2
71	Ferric chlorides	104.7	0.0	26.1	78.6
75	Cadmium and its compounds	76.5	0.0	0.5	76.0
80	Xylene	280.4	18.9	15.2	246.4
82	Silver and its water-soluble compounds	23.9	0.1	1.4	22.4
86	Cresol	372.2	0.2	26.3	345.7
87	Chromium and trivalent chromium compounds	147.3	0.0	8.8	138.4
88	Hexavalent chromium compounds	20.7	0.0	11.1	9.7
132	Cobalt and its compounds	4.2	0.0	0.0	4.1
133	Ethylene glycol monoethyl ether acetate	2.5	0.0	0.0	2.4
144	Inorganic cyanide compounds	15.0	0.1	1.5	13.4
213	N,N-dimethylacetamide	161.3	0.1	8.1	153.1
232	N,N-dimethylformamide	161.3	0.1	1.8	159.4
255	Decabromodiphenyl ether	71.0	0.0	0.2	70.8
272	Copper salts (water-soluble)	16,824.3	0.2	53.0	16,771.1
273	1-dodecanal	78.1	0.8	1.0	76.3
281	Trichloroethylene	0.0	0.0	0.0	0.0
296	1,2,4-trimethylbenzene	206.7	26.2	1.5	179.0
297	1,3,5-trimethylbenzene	21.8	6.1	0.4	15.2
300	Toluene	254.3	88.8	68.9	96.6
302	Naphthalin	3.0	0.0	0.2	2.7
304	Lead	1.6	0.0	0.0	1.6
305	Lead compounds	35,304.5	0.1	3.4	35,301.0
308	Nickel	608.0	0.0	1.2	606.8
309	Nickel compounds	120.5	0.0	14.6	105.9
332	Arsenic and its inorganic compounds	14.2	0.0	0.0	14.1
333	Hydrazine	15.7	0.1	0.0	15.7
349	Phenol	239.6	0.1	19.0	220.6
355	Bis (2-ethylhexyl) phthalate	201.4	0.0	0.2	201.3
374	Hydrogen fluoride and its water-soluble compounds	30.3	1.5	24.5	4.2
384	N-propyl bromide	2.2	2.0	0.0	0.2
392	N-hexane	2.8	0.2	0.5	2.1
394	Beryllium and its compounds	0.7	0.0	0.0	0.7
400	Benzene	0.5	0.1	0.0	0.5
405	Boron and its compounds	7.6	1.9	1.2	4.5
408	Poly (oxyethylene) octylphenyl ether	1.3	0.0	0.0	1.3
410	Poly (oxyethylene) nonylphenyl ether	1.4	0.0	1.1	0.3
412	Manganese and its compounds	1,505.6	0.0	0.0	1,505.6
438	Methylnaphthalene	31.8	1.1	0.0	30.7
453	Molybdenum and its compounds	2.0	0.0	0.3	1.7
Total		**57,328.7**	**150.5**	**303.5**	**56,874.7**

Note: This list is target for substances with a transaction volume of 1 tons or more (0.5 tons or more for Class 1 Designated Chemical Substances).

Furukawa Electric

(Unit: ton)

Substance No.	Substance	Volume handled	Volume released	Volume transferred	Volume neutralized
1	Zinc and its compounds	6.1	0.1	0.6	5.4
31	Antimony and its compounds	62.5	0.0	0.8	61.6
53	Ethylbenzene	11.2	0.0	0.3	10.9
80	Xylene	6.9	1.4	0.8	4.7
82	Silver and its water-soluble compounds	18.6	0.0	0.0	18.6
86	Cresol	14.1	0.0	11.0	3.1
88	Hexavalent chromium compounds	10.6	0.0	0.0	10.6
144	Inorganic cyanide compounds	16,814.0	0.2	49.8	16,764.1
213	N,N-dimethylacetamide	4.5	0.0	0.0	4.5
232	N,N-dimethylformamide	210.3	81.4	48.4	80.5
255	Decabromodiphenyl ether	1.3	0.0	0.0	1.3
272	Copper salts (water-soluble)	1.7	0.0	0.1	1.6
297	1,3,5-trimethylbenzene	2.9	0.0	0.0	2.9
300	Toluene	24.9	0.0	1.5	23.4
304	Lead	0.8	0.0	0.0	0.8
305	Lead compounds	11.4	0.0	0.0	11.4
308	Nickel	2.9	0.0	2.8	0.0
309	Nickel compounds	5.6	1.2	0.1	4.3
332	Arsenic and its inorganic compounds	1.9	0.0	0.3	1.6
Total		**17,212.3**	**84.3**	**116.5**	**17,011.4**

Note: This list is target for substances with a transaction volume of 1 tons or more (0.5 tons or more for Class 1 Designated Chemical Substances).

Environmental Accounting

Environmental accounting for the Furukawa Electric Group during fiscal 2012 is indicated below.
All data has been compiled in accordance with the Environmental Accounting Guidelines (2005 edition) published by the Ministry of the Environment.

Environmental conservation costs

(Unit: million yen)

Category	Key activity and the outcome	Furukawa Electric		Affiliated companies
		Total costs	Year on year	Total costs
Business area costs	Pollution prevention (air pollution, etc.), energy conservation, waste disposal, etc.	1,040	–28	1,728
Upstream/downstream costs	Recovery of packaging, drums, etc.	517	1	430
Administration costs	Environmental management system auditing, environmental impact monitoring, etc.	370	–10	166
Research and development costs	Development of environmentally sound products, research into alternatives for harmful substances	990	288	805
Social activity cost	Tree planting, local community cleaning activities, donations, etc.	5	2	2
Environmental remediation costs	Environmental impact assessments, cleanup of polluted soil, etc.	1	–81	24
Total		**2,923**	**172**	**3,154**

Note: Year-on-year comparative data regarding the environmental conservation costs for affiliated companies has not been provided due to changes in the scope of affiliated companies (16 companies).

Environmental conservation benefits

Emissions causing environmental impact	Furukawa Electric	Affiliated companies	Unit
	Reduction		
Volume of industrial waste disposal processed*	114	631	tons
Energy consumption (crude oil equivalent)	12	15	1,000 kl
Water consumption	–717	20	1,000 tons
Emissions of volatile organic chemical compounds	37	3	tons
CO_2 emissions	2	24	1,000 tons-CO_2
SOx emissions	–35	14	tons
NOx emissions	–11	–35	tons
Soot emissions	1	11	tons

* Excluding recycled waste
Note: Minus figures indicate an increase.

Economic benefits associated with environmental conservation activities

(Unit: million yen)

Details of benefits	Furukawa Electric	Affiliated companies
	Total benefit	
Revenue from recycling	412	457
Reduction in waste disposal costs	9	5
Reduction in energy costs	–650	–853
Reduction in water purchase costs	–17	8
Total	–246	–383

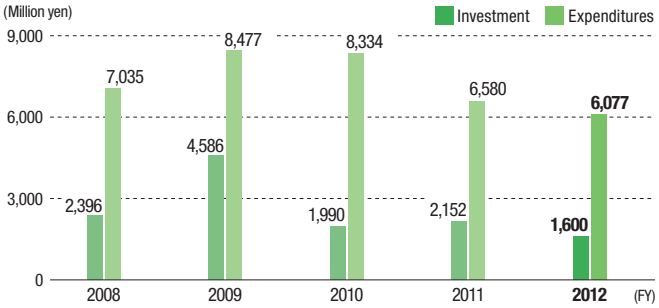
Note: Minus figures indicate an increase.

Investment and research costs

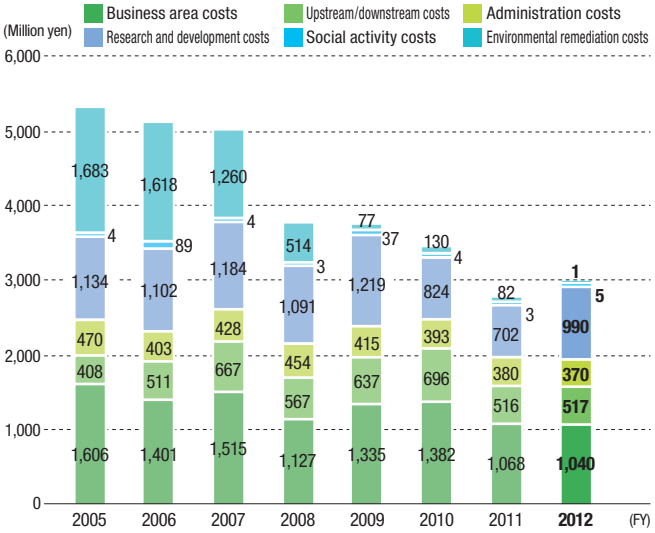
(Unit: million yen)

Investment and research costs	Furukawa Electric	Affiliated companies
	Total costs	
Environment-related investment	461	1,139
Total investment	7,301	11,577
Total research costs	9,014	4,968

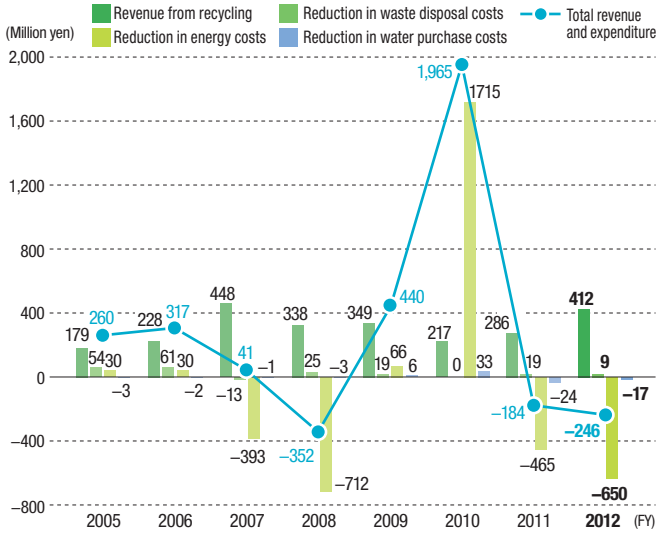
Environment-Related Investment and Expenditures



Environmental conservation costs (Furukawa Electric)



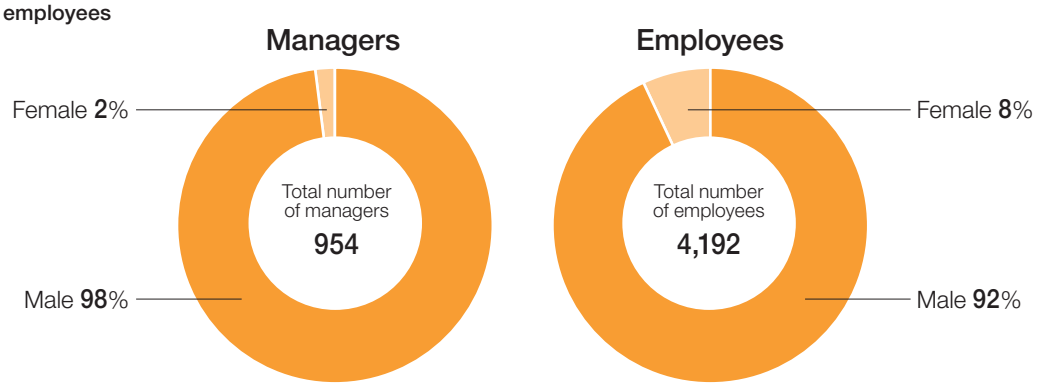
Economic benefits (Furukawa Electric)



Relations with Our Employees

Note: All data listed here are for Furukawa Electric on a nonconsolidated basis.

Gender ratio of employees



Recruitment figures by gender

		Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012	Fiscal 2013
Specialized staff	Male	84	79	73	66	49
	Female	17	13	9	12	10
	Total	**101**	**92**	**82**	**78**	**59**
	Foreign nationals	1	4	4	2	3
Professional staff	Male	86	44	15	21	2
	Female	1	0	0	1	0
	Total	**87**	**44**	**15**	**22**	**2**

Overtime

(Unit: Average hours per month)

	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Direct work	27.62	21.62	23.36	24.15	23.84
Indirect work	20.58	18.44	14.06	17.03	17.45
Average	**23.64**	**20.10**	**17.75**	**19.72**	**19.85**

Regular annual leave

Item	Fiscal 2007	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Unit
Days carried over per person (A)	23.0	22.8	22.5	22.0	22.6	Days
Days granted per person (B)	24.2	24.1	24.0	23.9	23.9	Days
Days acquired per person (C)	11.1	12.1	13.6	13.3	13.1	Days
Acquisition rate (C÷B)	45.9	50.2	56.7	55.6	54.8	%

Note: Regular annual leave is calculated as leave taken between September 16 and September 15 of the following year. Figures for fiscal 2012 are calculated for the annual leave year that has not yet concluded.

People taking volunteer leave

	Fiscal 2011
Female	0
Male	1
Total	**1**

Note: Volunteer leave is calculated as leave taken between September 16 and September 15 of the following year. Figures for fiscal 2012 are calculated for the volunteer leave year that has not yet concluded.

Maternity/paternity leave

	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Female	41	45	39	35	35
Male	5	2	4	4	10
Total	**46**	**47**	**43**	**39**	**45**

People taking refresh leave*

	Fiscal 2012
Female	1
Male	63
Total	**64**

Note: 1 Refresh leave is calculated on a calendar basis (January 1 to December 31)
2 Refresh leave is a system that accords employees who have worked for 25 years continuous leave of between 14 and 31 days.

Nursing care leave

	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Female	1	0	0	0	0
Male	2	0	0	1	2
Total	**3**	**0**	**0**	**1**	**2**

Major External Awards Received in Fiscal 2012 (Furukawa Electric)

CSR Initiatives

Award name/Content	Organization	Award recipient
Incentive award from the Minister of Health, Labour and Welfare for excellent workplaces, organization and persons who have contributed related to occupational safety and health Business site determined to have improved initiatives or other scope of activity to encourage excellence in health and safety	Ministry of Health, Labour and Welfare	Furukawa Electric Yokohama Works
BCAO Award, Award for Practical Excellence Promotion of BCM activities throughout the Furukawa Electric Group	Business Continuity Advancement Organization (BCAO)	Furukawa Electric

Research Paper

Award name/Related research paper	Organization	Award recipient
Japan Institute of Copper, 45th Research Association Award Impact of Crystal Texture of Cu-Ni-Si Alloys on the Bending Workability	Japan Institute of Copper	Hiroshi Kaneko Metal Research Center, Furukawa Electric
The Laser Society of Japan, Laser Industry Encouragement Award 2012 555nm Green Laser Using Fiber Laser as Fundamental Wave for Confocal Laser Scanning Microscope for Biotechnology	The Laser Society of Japan	Hiroshi Matsuura FITEL Photonics Laboratory, Furukawa Electric
Japan Institute of Electronics Packaging, Technology Award Low power Consumption 1060nm 10 Gb/s x 12-Channel Parallel-Optical Modules	Japan Institute of Electronics Packaging	Hideyuki Nasu and six others FITEL Photonics Laboratory, Furukawa Electric