



2021

KITZ GROUP Environmental Health
and Safety Report Digest

Environmental Health and Safety Report Digest

KITZ Group Principle of Environmental Activities

KITZ Group companies aspire to become operations worthy of society's confidence through the supply of environmentally friendly products and services and promotion of environment-responsive corporate activities.

KITZ Group Companies: Environmental Action Policy

KITZ Group companies shall recognize environmental issues as an essential perspective of corporate management and every employee shall positively participate in the following activities.

1. Development and supply of environmentally friendly products and services

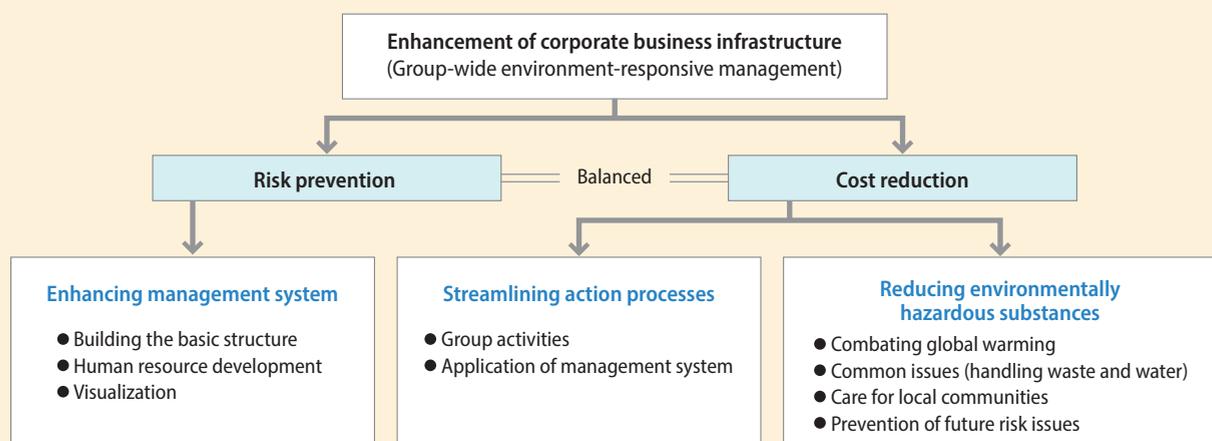
2. Effective use of resources

3. Promotion of reduction, reuse and recycle of waste

4. Prevention of environmental contamination

KITZ GROUP Environment Management Approach and Initiatives

In order to achieve the above target, KITZ will work on the basis of the concept of compatibility between "risk prevention" and "cost reduction". The concept of "compatibility" here is based on the idea that an organization can reduce its future costs by proactively engaging in environmental activities now to prevent soil contamination and other damage; and that they can drastically reduce costs by minimizing their business-related waste. These will also result in widely giving back to society.



KITZ Group Safety and Health Fundamental Philosophy

KITZ places the highest priority on safety and health in all of its activities based on the principle of showing respect for people. Group companies conduct extensive safety and health programs with the goal of zero accident.

KITZ Group Safety and Health Fundamental Policies

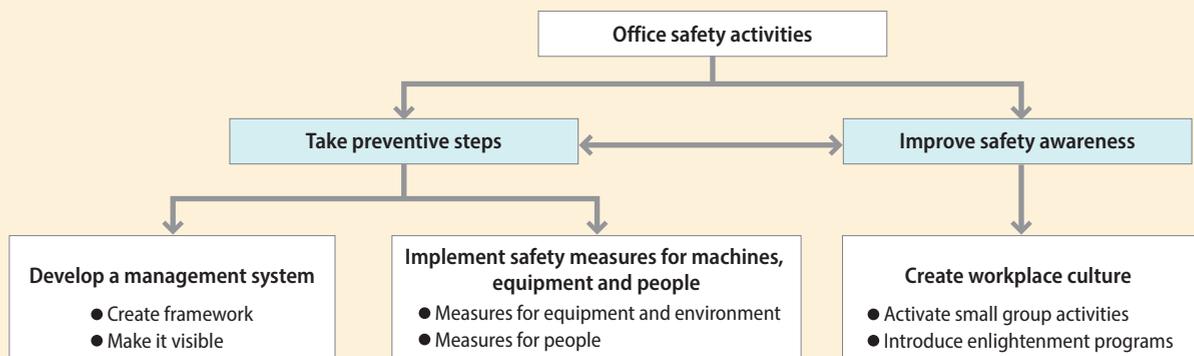
1. KITZ maintains stimulating and pleasant workplaces that contribute to the mental and physical wellbeing of all employees.
2. KITZ is dedicated to ensuring safety and health for all employees by complying with Japan's Industrial Safety and Health Act and other associated laws and regulations as well as by adhering to internal rules and standards.
3. KITZ improves safety and health management by educating and training all employees with regard to the knowledge and skills needed for safety and health programs.
4. KITZ is dedicated to ensuring the safety of its machinery and equipment so that employees can do their jobs without concern.
5. KITZ reduces exposure to risk factors with the goal of eliminating potential sources of danger and harm to employees in workplaces.

KITZ GROUP Health and Safety Activities Approach and Initiatives

The company will address safety from two directions: "Enhancement of safety activities and systematic incorporation of prevention measures into production lines" and "Promotion of volunteer activities at workplaces (bottom-up approach via small group activities)". Through this two-pronged approach, the company will encourage a change in every employee's mindset and increase employees' awareness with regard to safety, thereby reforming the corporate culture.

KITZ has formulated the following key actions as measures for employee safety and health with the aims of taking preventive steps for safety and improving safety awareness.

- Develop a management system (comply with safety and health related laws and regulations)
- Implement safety measures for machines, equipment and people (prevent similar accidents)
- Create workplace culture (promote zero accidents)



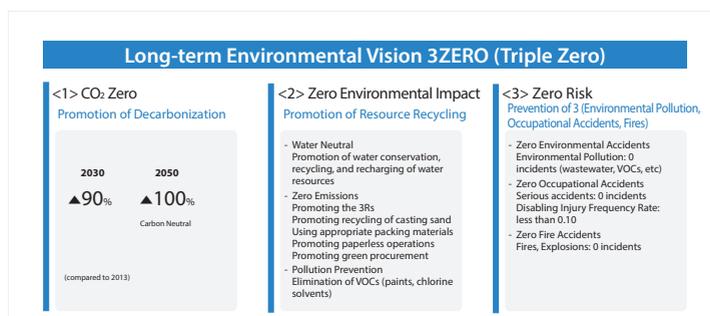
Promoting Sustainability Management

■ KITZ Group Environmental Activities

Since the 2000s, the KITZ Group has made environmental initiatives an important management theme, using activities that reduce the impact on the environment as well as developing and providing products and services that are gentle on the environment, to work towards being a corporate group that is trusted for providing safe products to society. In order to achieve this, the group has established an environmental management system, actively invested in management resources to use resources effectively, reduce waste, and promote recycling. Between 2013 and 2020, KITZ achieved reductions of over 10% in the five categories of CO₂, Energy, water resources, waste, and PRTR (chemical substances) (only landfill disposal was reduced by just 2%). These environmental initiatives have been recognized highly in society. For example in 2017 the Nagasaka plant was awarded the FY2017 Yamanashi Energy-saving Smart Company Award, and in 2020 received the Kanto Bureau of Economy, Trade and Industry Director-General's Award.

■ Mid- and Long-term Environmental Goals

In order to provide customers with high-quality products, mainly valves, in a prompt and continuous manner, KITZ has used an integrated production system starting from materials, since its establishment. In particular, casting is an important process that requires advanced production technology and large-scale facilities, while also involving various risks relating to energy, waste, and employee safety. It is for this reason that manufacturing that takes safety and the environment into account is essential, and the reason why we are working towards our long-term environmental vision of "triple zero."



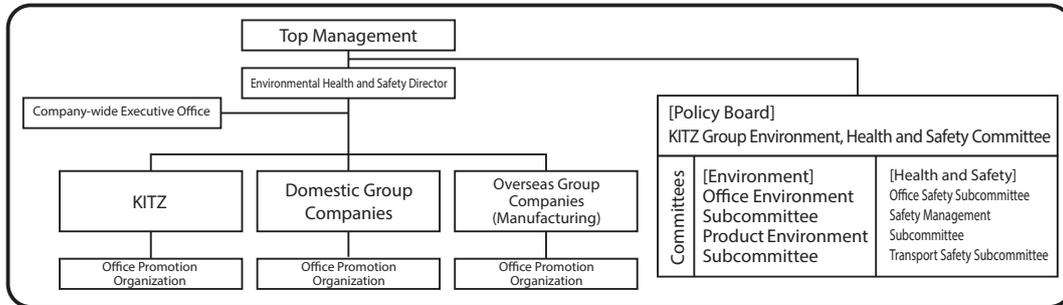
An especially important issue is the CO₂ Zero initiative. In response to the Paris Agreement, Japan has pledged to reduce its emissions from 46% from the base year of 2013 to 2030, and to reduce them to virtually zero by 2050. By having all domestic group companies use renewable energy for their electricity by the end of FY2024, KITZ will work towards achieving the mid-term environmental goal of an 90% or more reduction by 2030, and the long-term environmental goal of becoming carbon neutral by 2050.

The second important issue is Zero Environmental Impact. To this effect, we are tackling three themes: effective use of water resources, a resource closely related to valves; reduction of waste generated by plants and offices, and promotion of manufacturing without organic solvents to minimize not only air and soil pollution but also the impact on the health of employees.

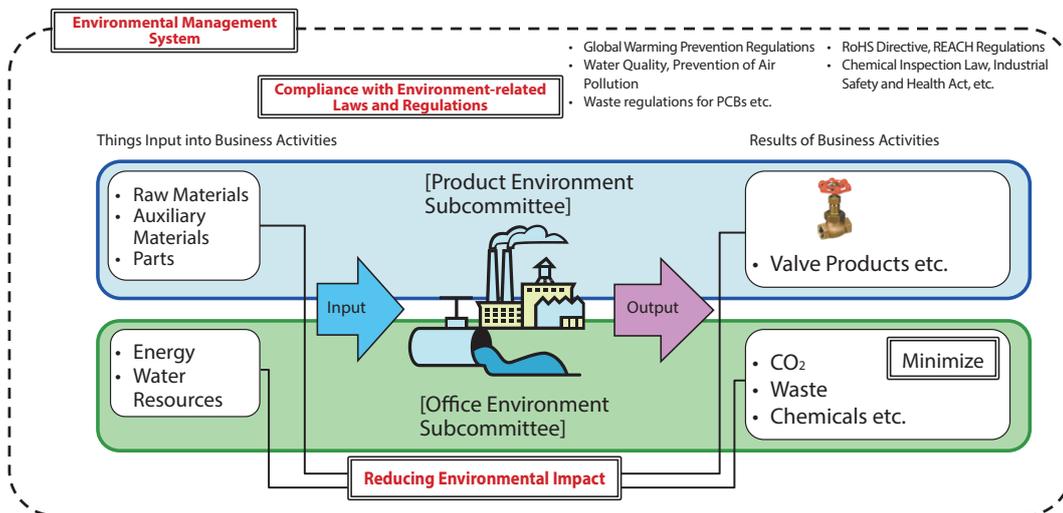
The third important issue is Zero Risk. We are working to maintain safe and secure manufacturing and stable operations through activities to prevent occupational accidents, environmental pollution, and fires.

Environmental Health and Safety Promotion System

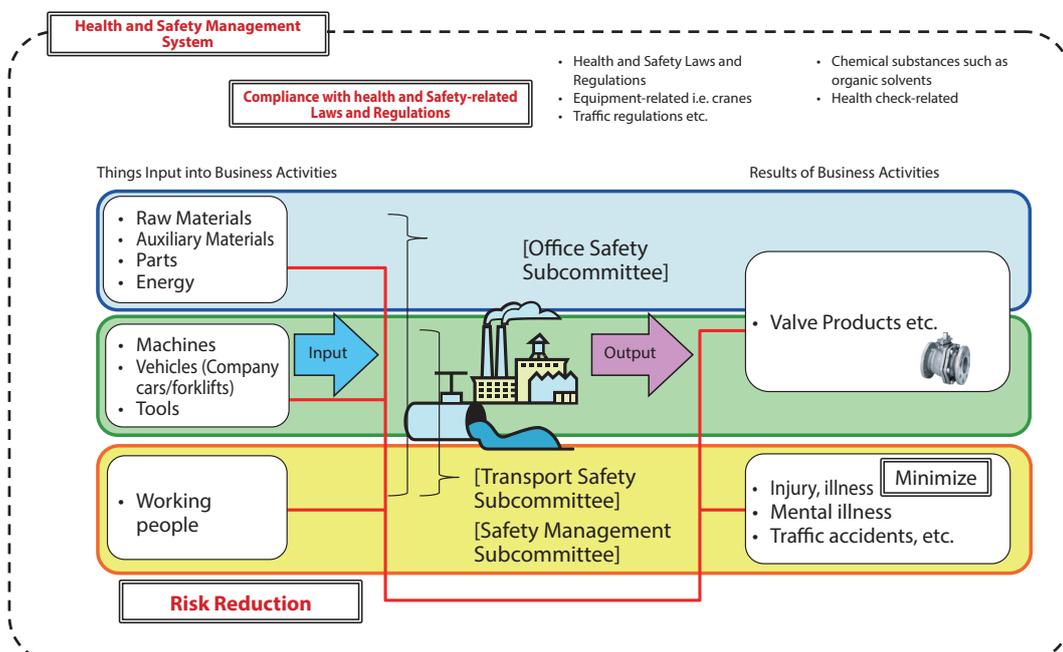
Promotion of Environmental Health and Safety within the KITZ Group is done by the KITZ Group Environment, Health and Safety Committee, which includes group company presidents and executive officers as members, and chaired by the Environmental Health and Safety Director. In addition to confirming the setting of measures and targets related to environmental health and safety, performance evaluation, and compliance with laws and regulations, the committee also deliberates on countermeasures to resolve issues. The Environmental Health and Safety Director reports to the board of directors on the status of implementation and progress management of the long-term environmental vision and environmental capital investment.



KITZ Group Environmental Activities Visual Representation



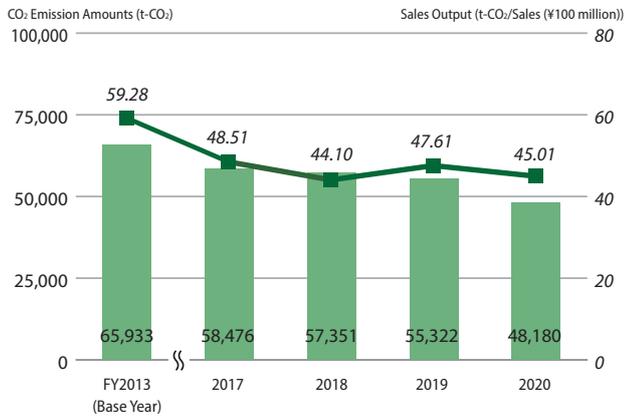
KITZ Group Health and Safety Activities Visual Representation



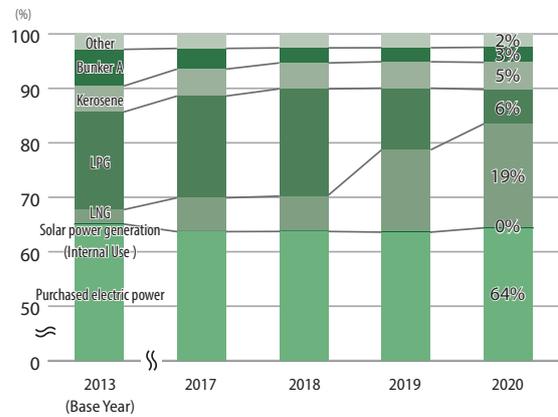
Main environmental and health/safety data

■ KITZ and domestic group companies (including sales offices)
 ■ Basic Sales Unit

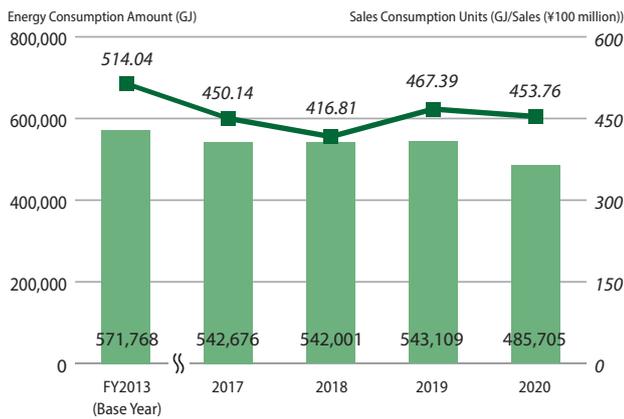
CO₂Emission (ton- CO₂)



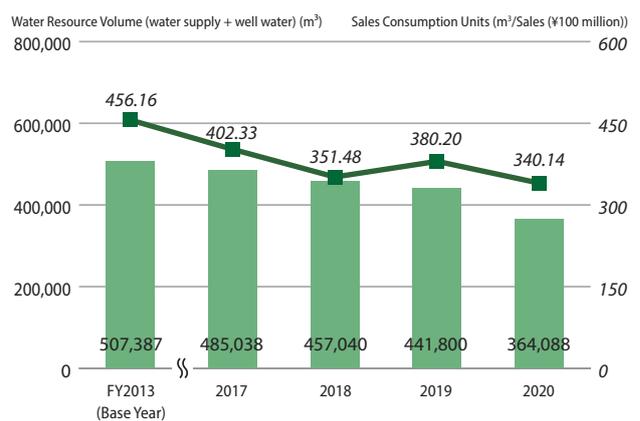
Changes in Energy Consumption Rates



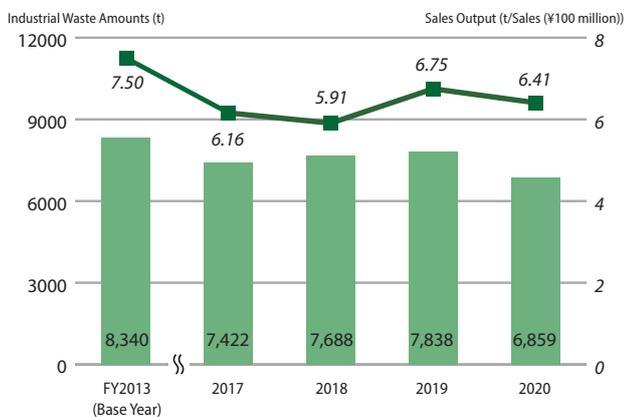
Energy Consumption (GJ)



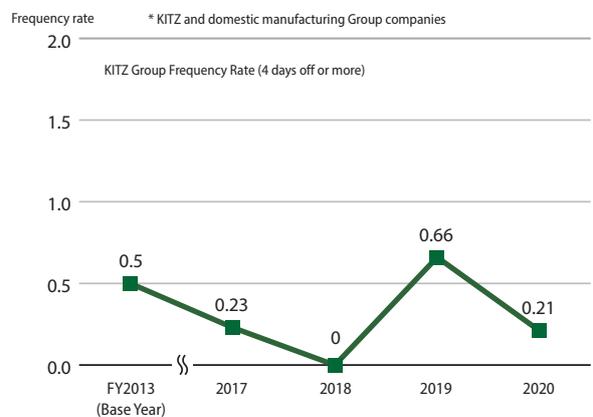
Changes in volume of water resources



Discharge of Industrial Waste (ton)



Trends in frequency rate



*Aggregated from January to December 2020 due to the change in the accounting period
 *CO₂ emissions (t-CO₂) are calculated using unadjusted coefficients.

Overall Image of Environmental Impact

INPUT		KITZ Domestic Group Companies		KITZ Domestic Group Companies	
Major Energies				Main Raw Materials	
● Electricity				● Lead (t)	1,982
● Purchased electric power (1,000 kWh)	86,823	● Nickel (t)	477	● Manganese (t)	58
● Solar power generation (1,000 kWh)	45	● Chrome (t)	497	● Copper (t)	32,967
● City gas (1,000 m ³)	1,690	● Zinc (t)	13,505	Main Auxiliary Materials	
● LNG (t)	461	● Sand for cores and castings (t)	3,129	● Paint and thinner (t)	143
● Bunker A (kl)	345	● Oil solution (t)	142		
● LPG (t)	611				
● Kerosene (kl)	663				
● Cold and hot water (GJ)	3,528				
Water					
● Clean water (1,000 m ³)	212				
● Underground water (1,000 m ³)	152				

KITZ GROUP		Development and Design	Procurement	Production	Logistics	Sales
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OUTPUT		KITZ Domestic Group Companies		KITZ Domestic Group Companies	
Emission in Air				Discharge of Waste	
● CO ₂ (t)	48,180	● Industrial waste (t)	6,608	● Non-industrial waste (t)	251
● Dust (t)	5.3	● Valuable substances (t)	5,376	● Final disposal (t)	333
● NO _x (t)	8.3	Discharge of PRTR Target Chemicals			
● SO _x (t)	11.1	● Air (t)	59	● Waste (t)	157
		● Public water (t)	0.0		

Environmental Accounting

Environmental Conservation Costs

(Thousand of yen)

Category	Main actions	Capital investment	Expenditures
Cost for premises		183,055	1,213,732
Breakdown	Pollution control	73,260	410,241
	Global environment protection	102,023	437,258
	Resource circulation	7,771	366,233
Product recycling	Collection and recycling of used goods	0	23,917
Administrative duties	ISO-related works, environmental measurement and disclosure of environmental information	2,818	142,311
Research and development	Development of lead-free and other environmentally friendly products	0	113,344
Social activities	Promotion of greening activities	0	953
Damaged environment recovery	Purification of underground water	0	600
Other costs		0	0
Total		185,873	1,494,857

Total costs	Costs for environmental conservation	Total operation costs (A)
Total capital investment	6.3% against total operation cost (A)	2,937,341
Total R&D expenditures	5.0% against total operation cost (A)	2,250,915

Environmental Conservation Effects

Category	Numerical targets (Unit)	Results in FY2019	Results in FY2020	FY2020 less FY2019
Effects related with input resources	Consumed total energies (GJ)	531,715	485,705	(46,010)
	Consumed PRTR materials (ton)	2,428	3,242	814
	Consumed clean water (m ³)	243,056	211,653	(31,403)
	Consumed underground water (m ³)	196,900	152,436	(44,464)
Effects related with output waste and pollutants	Greenhouse gas emission (ton-CO ₂)	54,109	48,180	(5,929)
	Discharged or displaced chemicals (ton)	282	205	(77)
	Discharged total waste (ton)	7,761	6,859	(902)

Economic Effects of Environmental Conservation Activities

(Net financial gain)

(Thousands of yen)

Details of effects		Amount
Profits	Earned from recycling waste and used products	708,223
Saved expenditures	Saved by energy saving activities	(760,760)
	Reduced recycling expenditures	241,976
	Saved by waste reduction	(6,564)
Total		182,875

Scope of compilation is KITZ Corporation (Head Office, Nagasaki, Ina, Chino), KITZ Metal Works Corporation, KITZ Micro Filter Corporation, KITZ SCT Corporation, Shimizu Alloy Mfg. Co., Ltd., KITZ Engineering Service Co., Ltd. and Hotel Beniya

