13 Environmental Management

(1) Environmental policies

Sumitomo Metals conducts energy saving, the reduction and recycling of resources, and the development of environmental technology. We continue to be actively engaged in a number of programs aimed at constructing an environmental-aware society, and at environmental preservation on a global scale.

Medium-term Targets		Fiscal Year 2010 Results
Reducing the environmental impact of our production processes	● Activties for preventing global warming	
	・Reducing energy consumption (Objective for steel industry : Average 10% reduction for FY2008-2012 from FY1990 levels)	9.1% reduction (compared to FY 1990)
	・Reducing CO_2 emissions from energy sources (Objective for steel industry : Average 9% reduction for FY2008-2012 from FY1990 levels)	8.3% reduction (compared to FY 1990)
	● Contributing to the creation of a reduce/reuse/recycle society	
	・Reducing the amount of slag generated per unit of steel production	6% reduction in blast furnace slag (compared to FY 1996) 33% reduction in steel slag (compared to FY 1996)
	・Reducing the amount of final disposal of slag (Objective for steel industry : 75% reduction in FY 2010 from FY 1990 levels)	86% reduction (compared to FY 1990)
	● Environmental risk management	
	・Reducing the transfer and release of chemical substances (chemicals designated by the PRTR Law)	38% increase (compared to FY 2001)
	● Environmental management	
	・Reinforcing environmental management for pollution control	Promoted acquisition of pollution control management qualifications
	・Promoting the establishment of environmental management systems at Group companies	Established at 35 companies
Reducing environmental impacts through our products	・Development and sales of eco-conscious products	・High-pressure fuel injection pipe for diesel engines ・Heat-releasing pre-painted steel sheets
	・Working to receive environment-related awards	The Japan Institute of Metals Technical Development Award
Developing technologies for the future	・Technological development of an eco-conscious steel production process (national project)	Started from FY 2008
	・Technological development in an innovative production process of molten pig iron (national project)	Started from FY 2009
Contributing through international and domestic activities	・Activities for international contributions	Japan-China exchange meetings, APP, other exchange programs
	・Participation in tree-planting activities	Participated in activities in Amagasaki, Wakayama, Hachinohe, and other locations

(2) Environmental accounting

① Environmental measures costs

In FY2010, environmental measures costs comprised 19.5 billion yen in environment-related capital investments, and 57.2 billion yen in maintenance costs related to environmental preservation. In addition, the cost of environment-related R&D, such as the development of eco-conscious products, was 15.1 billion yen.

(Unit: 100 million yen)

Item			Definitions	FY2010	
				Investment	Maintenance
Business area costs	Environmental measures costs	Air pollution	Costs of electricity and other operating costs, and maintenance costs of dust collectors, exhaust gas desulfurization, denitrization, etc.; facility maintenance costs and expenses for material stockyard dust control	79.2	124.2
		Water pollution	Costs of electricity/chemicals and other operating costs, and maintenance costs of effluent treatment facilities	9.2	15.8
		Other environmental load	Costs involving measurement for noise, odor, soil and other environmental load	0.5	1.0
	Global environmental measures costs		Costs of electricity and other operating costs, and maintenance costs of waste-heat and wasteenergy recovery equipment	95.6	8.3
	Resource recycling costs		Costs of electricity/chemicals and other operating costs, and maintenance costs of water recycling facilities; costs related to recycling of by-products; costs related to reduction and processing of industrial wastes, or to outside contracting of such services	6.4	246.8
Management activity costs			Costs for employee environmental training, ISO 14001 operation, and monitoring and measuring environmental loads, and personnel costs of environmental preservation organizations	—	9.0
R&D costs			R&D costs (including personnel) for eco-conscious steel products and reduction of environmental load during production and logistics	—	150.7
Social activity costs			Costs for creating greenbelts on plant grounds, support for external environmental activities and disclosure of environmental information	4.1	5.7
Environmental damage costs			SOx levies stipulated by the Law Concerning Pollution-related Health Damage Compensation and Other Measures	—	11.0
Total				195	572

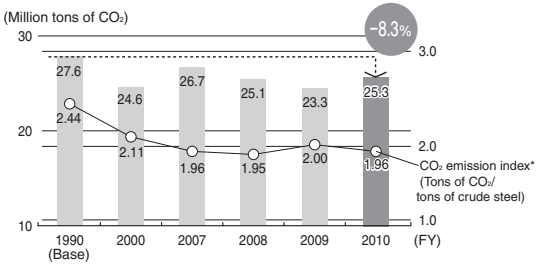
The costs of environmental measures were categorized and tabulated based on the "Environmental Accounting Guidelines 2006" issued by the Ministry of the Environment. However, maintenance costs do not include depreciation expenses.

② Effects of environmental measures

Environmental measures that can be quantified in monetary terms include revenue from the sale of fine slag powder, roadbed sub base materials, and other by-products, which totaled approximately 3.0 billion yen, while revenue generated by disposing waste for other industries on a consignment basis amounted to about 0.1 billion yen.

(3) Total and unit CO_2 emission

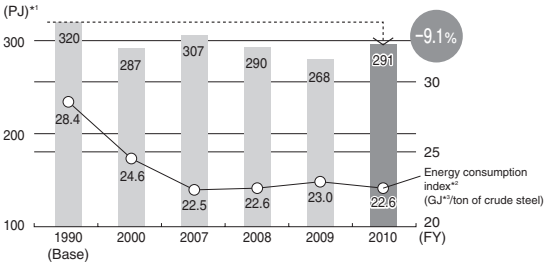
Production of crude steel by Sumitomo Metals in fiscal 2010 was 12.90 million tons, a 14.3% increase over the amount in fiscal 1990. But our efforts at reducing CO_2 production resulted in a 8.3% decrease during the same period, to 25.3 million tons. Our emission of CO_2 per ton crude steel was 1.96 tons - 20% less than it had been in fiscal 1990.



* CO_2 emission index･･･CO_2 emissions per unit ton of crude steel

(4) Total and unit energy consumption

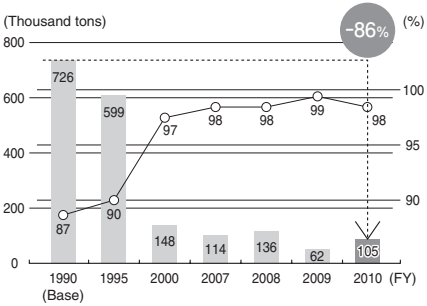
Our energy consumption per ton crude steel in fiscal 2010 was 16.3% less than it had been in fiscal 1990 and was one of the lowest of all integrated steel producers in the world.



*1 PJ(peta joule)･･･A unit of energy or heat the prefix "peta" is equal to 10^{15}
*2 Energy consumption index･･･Energy consumption per unit ton of crude steel
*3 GJ(giga joule)･･･The prefix "giga" is equal to 10^{9}

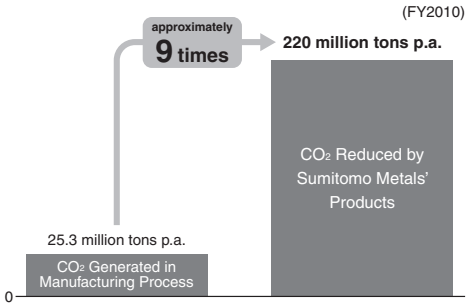
(5) The recycle ratio and waste disposal volume

We have endeavored to recycle our by-products to the greatest extent that is feasible. Disposal of waste in fiscal 2010 was down to 105,000 tons, 86% less than it was in fiscal 1990, and our recycle ratio is 98%.



(6) Reducing CO_2 emissions by making our products more eco-friendly

Our products contribute to our customers' development of eco-friendly products. Our products are estimated to reduce our customers' CO_2 emissions by approximately 9 times more than our CO_2 emission in manufacturing processes.



(Note : Company estimates)

(7) Eco-conscious product map

Contributions for the energy indutry	・Stainless steel boiler tubes for ultra supercritical coal-fired power generation ・Steam generator heat transfer (SG) tubes for pressurized water reactor (PWR) nuclear power plants ・"SM125S" Super high-strength oil country tubular goods (OCTG) for sour service ・"Super 13Cr steel pipe" for pipelines ・"CLEANWELL® DRY" oil well pipe joints ・"FCA-W" steel plate, a high-tensile-strength plate for improving the fatigue strength of welded joints
Contributions for the automobile, railways and aerospace industries	・Non-oriented electromagnetic steel sheet for high-efficiency motors ・High-efficiency crash box ・Non-heat treated nitrocarburized high-strength crankshaft steel ・High-strength steel for forged connecting rods ・High-pressure fuel injection pipe for diesel engines ・High heat-resistance stainless steel "NAR-AH-4" and "Dual-wall exhaust manifold" ・"NAR-301L HS1" stainless steel plate for cylinder head gaskets ・Hydrogen-absorbing alloys for hybrid automobile nickel-hydrogen batteries ・Stainless steel sheet for polymer electrolyte fuel cell separator ・Aluminum wheels for trucks and buses ・High-speed railway wheels, axles, and bogie trucks ・Pure titanium sheet for aircraft, titanium alloy rods for aircraft engines
Contributions for the other industries	・Heat-releasing pre-painted steel sheets ・Chrome-free steel sheet ・"SMart BEAM™" lightweight welded H-beam ・"GEO-WING PILE™ Ⅱ" steel pipe pile for the rotary penetration method