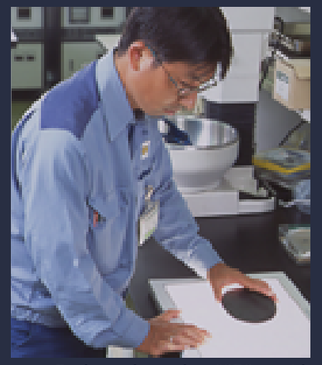
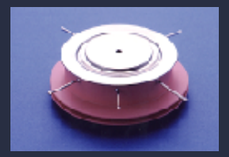
Pursuing technological innovations to benefit the customer and secure the Company's future


Fundamental research on SOFC materials


Development of soil decontamination technologies


Research on SiC inverters


Biosensors for cadmium



Liquid-hydrogen mobile station

Two Overriding Aims

In conjunction with its quest to carry out its corporate social responsibilities apropos to safety assurance and stable power provision, Kansai EP accords the highest priority to research and development. R&D programs at Kansai EP have two focal points: to provide products and services conducive to fostering customer satisfaction, and to achieve breakthroughs that will contribute to the Company's future business operations. Here, we introduce a sampling of some of our recent achievements in R&D.

Technologies to Protect the Earth's Environment

Among an abundant array of initiatives directed at protecting the global environment, Kansai EP is conducting ongoing research and development of chemical absorption methods for recovering CO_2 by means of chemical absorbents. The related separation and recovery technologies have already been achieved, and the results of this research program have been acknowledged in the form of patents awarded to Kansai EP not only in Japan but also in the United States, Europe and Asia. Today, our technologies in this field have already been adopted in a urea production plant in Malaysia.

The Company is also actively engaged in the development of soil decontamination technologies employing biotechnologies. We are presently undertaking research into soil remediation technologies and into biosensors for measuring heavy metals, dioxins and other environmentally detrimental substances.

Next-Generation Semiconductor Elements

Today, Kansai EP is making steady progress in developing silicon carbide (SiC) diodes, next-generation power semiconductor elements that are expected to enable major reductions in power loss. In contrast to conventional silicon elements that are vulnerable to significant power loss during current flow, etc., and whose crystals break easily under high voltages, SiC diodes are revolutionary in their ability to reduce power loss substantially. We have already succeeded in developing 100kVA inverters using SiC diodes, and once they shift into commercial production and supersede today's Si inverters, power loss is expected to be curbed by more than 50%. In that way, SiC diodes are projected to make a dramatic contribution to energy savings throughout the industrial sector.

High-Efficiency Fuel Cells

Solid oxide fuel cells (SOFC) are garnering attention today as an epochmaking new technology offering excellent characteristics in generation efficiency, stability and environmental friendliness. At Kansai EP, we are engaged in research into intermediate-temperature SOFCs, and we have already succeeded in developing fuel cells boasting high power density as well as an SOFC-based power-generating system. These breakthroughs are integral to our pursuit of commercial production of power systems of low cost and compact size.

Electric Heat-Pump Systems

In a quest to induce numerous customers to make electric power their energy resource of choice, Kansai EP is presently engaged in the development of heat-pump water heaters as the centerpiece of its anti-global warming initiatives.

For use in the home, the Company is developing heat-pump water heaters that are friendly to the environment and economical to operate. Known as "Eco Cute," these systems employ a natural refrigerant (CO_2). For business customers, we are currently carrying out R&D into heat-pump water heaters and heat-pump air-conditioning units for business applications. These systems are being engineered for outstanding efficiency, compact size and convenient use – features to induce the corporate sector to select these systems as utility units supporting their business needs.

Kansai EP carries out industry-leading R&D projects targeted at bringing benefits to its customers, to the planet, and to the Company's future growth.

Hydrogen Energy Technologies

Hydrogen today is the object of high expectations as an ideal source of energy to replace fossil fuels, and topping the list of anticipated applications are automobiles and fuel cells. In response, Kansai EP is conducting R&D into liquid-hydrogen mobile stations in preparation for the coming era of the "hydrogen society." The mobile station is being engineered as a transport and supply unit capable of carrying large volumes of hydrogen in a compact configuration, and it is expected to lead to the realization of hydrogen supply systems that are low in cost and highly mobile.

Intellectual Property Activities

Kansai EP possesses proprietary technologies in areas including CO_2 separation/recovery, power semiconductor elements, fuel cells and biotechnology, and the Company raises the added value of its products and services by proactively acquiring the intellectual property rights to these innovations. As of the end of the 2007 fiscal year, we have secured a total of 958 patents. We are also focusing on acquiring trademarks to protect our corporate brand, etc., and at the end of fiscal 2007 we are in possession of 79 registered trademarks. By aggressively obtaining patents and other intellectual property rights in this manner, we are protecting our in-house technologies. Besides applying these technologies in our Group business operations, we also intend to undertake active licensing initiatives for patents that are suitable to use outside the Company.

Number of Patent Applicatoins