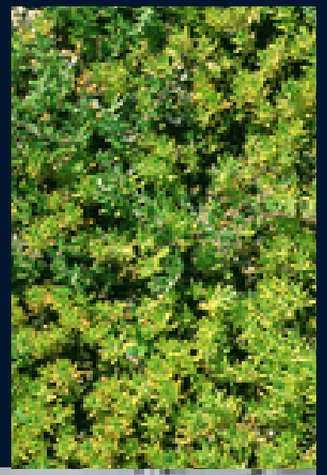
Pursuing epochmaking technologies for the Earth's benefit and the Company's future



Basic research into SOFC materials

Development of soil decontamination technologies

Top Priority on Dual Benefits

Kansai EP's aggressive stance on research and development has two overriding objectives: to provide added convenience to our customers while contributing to environmental protection, and to forge a solid base for the Company's future operations. Here we introduce a sampling of some of our recent initiatives and achievements in R&D.

Technologies to Protect the Earth's Environment

In conjunction with an array of initiatives all geared toward protection of the global environment, Kansai EP is carrying forward research into high-performance chemical absorbents of CO_2. We have already achieved the related separation and recovery technologies. The tangible results of our R&D program have secured patents not only in Japan but also in the United States, Europe and Asia, and our technologies have been adopted in a urea production plant in Malaysia. We are also engaged in research into technologies to regenerate tropical rain forests, in order to revitalize the natural environment and expand CO_2 absorption zones.

Another R&D focus related to environmental protection is the development of soil decontamination technologies employing biotechnologies. We are currently conducting research into soil remediation technologies and into biosensors for measuring heavy metals, dioxins and other environmentally detrimental substances.

Next-Generation Semiconductor Elements

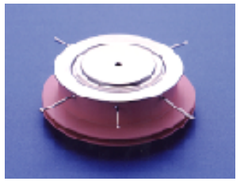
Today the Company is actively pursuing research into silicon carbide (SiC) diodes, next-generation power semiconductor elements that are expected to enable major reductions in power loss. In contrast to conventional silicon elements that are vulnerable to significant power loss during current flow, etc., 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 inverters using SiC diodes, and once they shift into commercial production and supersede today's Si inverters, power loss will be curbed by more than 50%. In that way, SiC diodes are projected to make a dramatic contribution to energy savings throughout the entire 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 low-temperature SOFCs. We have already succeeded in developing fuel cells boasting high power density and an SOFC-based power-generating system, as part of our ongoing quest to realize power systems of low cost, light weight and compact size.

Kansai EP is undertaking an abundant array of R&D projects all targeting innovations with environmental merit and growth-driving potential.

Metal fatigue inspection by electron microscope



SiC diode module testing