

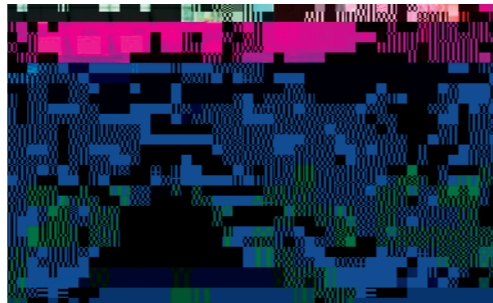


Amid accelerated efforts to address global warming, demand is growing for products that help reduce CO₂. Against this backdrop, KHI offers various highly efficient energy utilization products, such as cogeneration systems driven by gas turbines or gas engines, all over the world. We also actively delve into renewable energy utilization technologies, such as those for woody biomass power generation and bioethanol production.

KHI developed the L30A, a new-model gas turbine for power generation in the 30MW-class—our largest output capacity—to drive such energy solutions as cogeneration systems. This gas turbine boasts electric generating efficiency of more than 40%—the world’s highest rate in this output class—which is made possible by raising compressor pressure, applying newly developed heat-resistant materials and improving turbine cooling technology. Also noteworthy, the L30A can achieve total energy efficiency exceeding 83% in a cogeneration system and generating efficiency above 50% in a combined cycle power plant. In terms of environmental performance, this gas turbine holds NO_x emissions up to 15ppm (O₂ = 15%)—again, a world’s best—because it features KHI’s own DLE (Dry Low Emission) combustion system.

KHI reached an agreement with Daicel Chemical Industries, Ltd., to install a cogeneration system equipped with the first market-ready L30A at the latter’s Himeji Production Sector Aboshi Plant and begin a field test. The field test will serve two purposes: supply the Aboshi Plant with electricity and heat (steam) and contribute to a decrease in CO₂ emissions, and confirm the durability and reliability of the L30A.

The Great East Japan Earthquake was a catalyst to revisit the idea of distributed power generation, such as cogeneration systems, especially from the perspective of energy utilization efficiency and energy security. Given this reality, we will apply the technologies we have at our disposal to realize highly efficient use of energy whether at home or abroad while addressing the need for power source diversification.

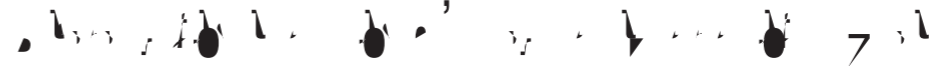
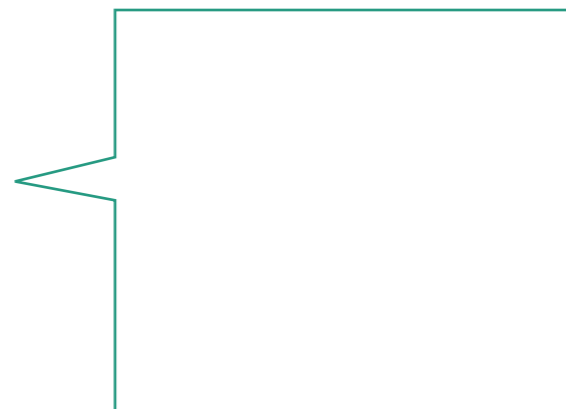


Power plant

Boiler

Efficiency = 90%

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KHI undertakes a variety of approaches to extend high-performance, high-quality products to customers around the world. The following section highlights some examples from the Precision Machinery Company.

The Precision Machinery Company manufactures hydraulic machinery and units responsible for motion control in various machines. Of the products made by this internal company, machinery for use in construction equipment, such as hydraulic shovels, have captured a large share of the market and have earned a solid reputation for quality and reliability. While small in size, our products are used at high speed and under high pressure, and their dependability under such conditions is the result of sophisticated design and processing technologies as well as persistent quality control at every stage of production. Indeed, this is an amalgamation of multiple technologies, from design through to production.

Some products made in Japan are also made abroad, at four locations, and the Company promotes diverse activities to ensure that all the machinery and components it provides are of the highest quality wherever in the world its customers may be.

