Green Gas Engine

Features
◆ High electrical efficiency 48.5% for economical operation.
◆ Low NOx emission 200ppm or less (at 0% O2) for high environmental performance.
◆ Electric spark ignition system is applied and no liquid fuel is required.
◆ Wide power range covering 5 to 7.8MW.
◆ Developed by Kawasaki’s own technology to meet customer demands flexibility.
◆ Lightweight for easy transportation and installation.

Basic Concept or Summary
- Spark plug is applied for ignition system.
- Gas supply to main and pre-combustion chambers is independently controlled by solenoid valves to achieve optimum gas injection.
- Anti-knocking performance is improved by optimizing combustion chambers.
- Individual cylinder control is applied to obtain the maximum performance.
- Cogeneration system by utilizing waste heat saves energy significantly.

Effects or Remarks
- Total efficiency of 84.9% by utilizing waste heat
- World highest electrical efficiency (48.5%) : CO2 reduced by approx. 5%
- Low NOx, 200ppm or less (at O2=0%): NOx reduced vastly

Installation in Practice or Schedule
Domestic ◆ 7.8MW demonstration power plant is installed at Joetsu City, Niigata Prefecture, and has been operated since December 2007.
◆ 5MW power plant is under construction at KHI Kobe works and the operation will be started in January 2010.

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