

## Fuel Cell Power System

### Features

Attention has been focused on fuel cells in clean power generation equipment that utilize liquefied gas(LNG). The use of an electrochemical power generation method using hydrogen and oxygen in the air makes it extremely efficient and quiet. It is also very environmentally friendly, producing almost no NOx emissions when compared with combustion methods.

- ◆ Effective utilization of gas by power generation
- ◆ Reducing CO2 emissions by power generation used surplus gas
- ◆ High-efficiency power generation under low load (Fig. 1)
- ◆ Long life time (Overhaul every 7.5 years) (Other power generation method : every 2 - 3 years)
- ◆ Clean exhaust gas (Fig. 2 and 3)
- ◆ Low noise (Fig. 4)
- ◆ Heat effective utilization

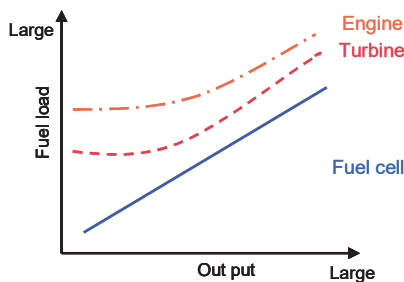


Image of Out put – Fuel load  
Fig.1

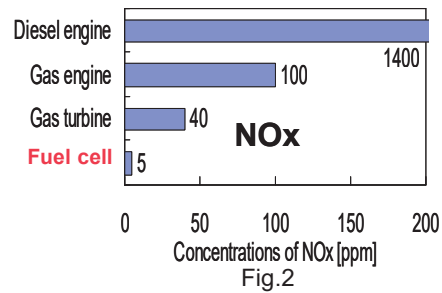


Fig.2

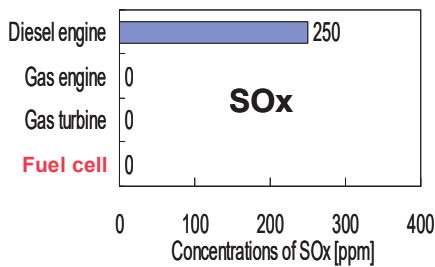


Fig.3

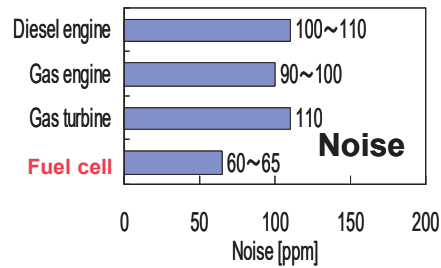
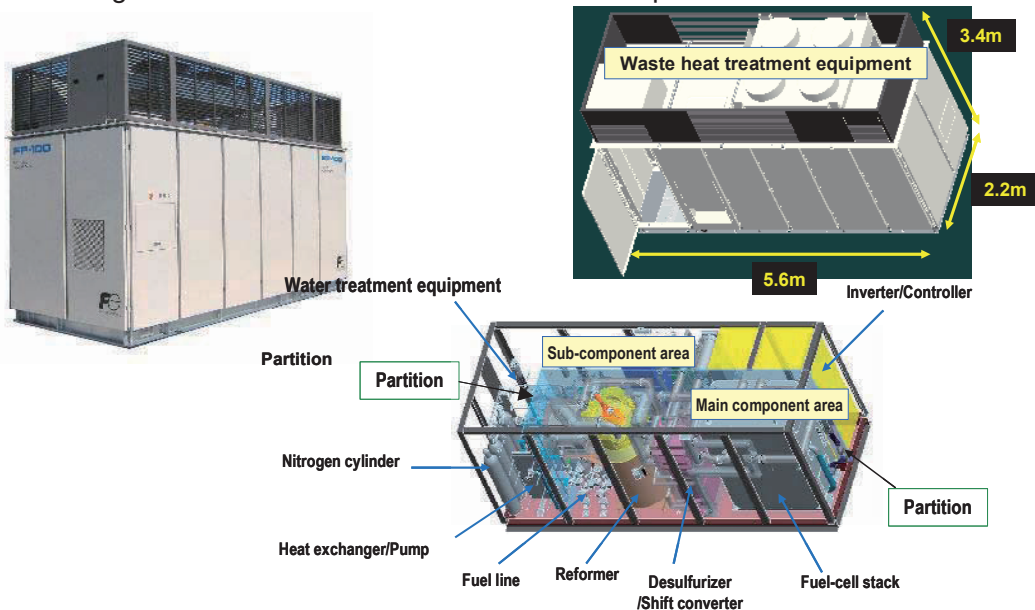


Fig.3

### Basic Concept or Summary

- ◆ Structure diagram : Reduced area of installation and simplified installation.

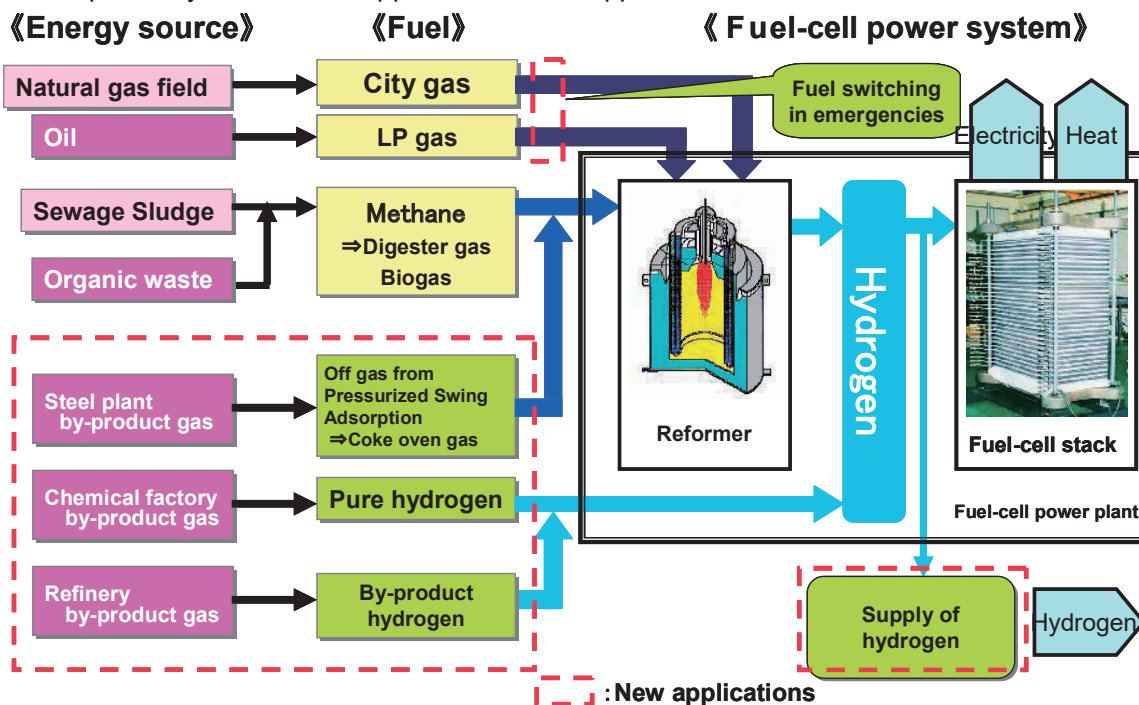


## ◆Specification

|                       |   |
|-----------------------|---|
| Rated output power    | 100kW AC  |
| Output voltage        | 3Φ3W, 210V/220V   |
| Output frequency      | 50Hz/60Hz   |
| Generating efficiency | 42% [LHV(net)]<br>(digestion gas : 40%)   |
| Heat Output           | 1) High-temperature exhaust heat<br>Recovery Type / 50kW (90 degree)<br>Total efficiency : 62% [LHV]      |
|                       | 2) Mid-temperature exhaust heat<br>Recovery type / 123kW(60 degree)<br><b>Total efficiency: 92% [LHV]</b> |
| Exhaust gas           | Nox : less than 5ppm [O2 0%]<br>SOx, dust : less than the detection limit                                 |
| Consumption fuel      | City gas : 22m3/h(Normal)<br>Digestion gas : 44m3/h(Normal)   |
| Operating method      | Fully automated / system linkage /<br>Self-sustained operation  |
| Volume<br>W x L x H   | 2.2m (W) x 5.6m(L) x 3.4m(H)  |
| Weight                | 15ton (Digestion gas-fed type<br>16ton)   |

## ◆Application

Fuel cell power system can be applied to various applications as follows;



### Installation in Practice or Schedule

Hospital  
Hotel  
Office building  
Sewage disposal plant  
College

**Contact: Fuji Electric Co., Ltd.**

Gate City Ohsaki, East Tower, 11-2, Osaki 1-chome, Shinagawa-ku, Tokyo, Japan

Tel: +81-3-5435-7048 Fax: +81-3-5435-7452

URL: <https://www.fujielectric.com/>

Fuel Cells: <https://www.fujielectric.com/products/fuelcell/>