

Plant Profile:

Circulating fluidised bed combustion
Sodegaura, Japan

DOOSAN
Lentjes

Doosan Lentjes deploys its circulating fluidised bed (CFB) boiler technology at a new 75 MW_e biomass-fired power plant located in Sodegaura, Chiba Prefecture, Japan.

Supplies & Services

- Engineering and procurement of the boiler island including the key boiler and flue gas cleaning equipment
- Advisory services for erection and commissioning

Customer benefits

- Full compliance with all governmental emissions requirements
- Highly efficient and CO₂ neutral power production
- Full EP solution delivered from Doosan Lentjes and its parent company
- Complete solution from fuel silo to stack provided by single OEM with strong competences in boiler design and flue gas cleaning



CFB-biomass role model for the Japanese market

In 2018, Doosan Lentjes was awarded the contract to provide key circulating fluidised bed (CFB) boiler technology for a new 75 MW_e fully biomass-fired power plant located in Sodegaura, Japan. The project is part of a larger EP contract awarded to Lentjes' parent company Doosan Enerbility (DE). The Japanese company, Chiyoda Corporation acts as main contractor while Osaka Gas Group is the owner of the new plant.

The Doosan Lentjes' contract comprises engineering and procurement of the boiler island including the major boiler and key flue gas cleaning equipment along with advisory services for erection and commissioning.

Applying the flexible CFB boiler technology enables the customer to efficiently generate power from their biomass fuel used while fully complying with the strict local emissions regulations.

Key project data

Customer	Doosan Enerbility
Final customer	Sodegaura Biomass Power Co. Ltd. (Osaka Gas Group)
Location	Sodegaura, Chiba Prefecture, Japan
Contract award	2018
Main fuel	Biomass wood pellets
Number of lines	1
Plant output	75 MW _e
Thermal capacity	180 MW _{th}
Live steam	224 t/h (BMCR)
Steam parameters	170/40 bar / 560/560 °C
Design fuel	
LHV	17.5 MJ/ kg
Ash	1.0 %
Moisture	6.6 %
Sulphur	0.1 %
Chlorine	0.05 %
Emissions (acc. to 6% O₂, dry, monthly av.)	
SO ₂	20 ppm
NO _x	30 ppm
Du _x t	20 ppm
Thermal efficiency	94.7 %

Doosan Lentjes provides proprietary environmental technologies for thermal waste treatment and energy generation. Our areas of expertise include the incineration of renewable fuels such as waste, sewage sludge and biomass, heat recovery systems and flue gas cleaning equipment. We deliver flexible solutions for long-term waste disposal safety and climate-friendly steam and power generation.

As a member of the global Doosan Group, Doosan Lentjes is part of a strong international network of companies providing complementary technologies, skills and value to customers the world over.

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