TAKUMA CO., LTD.

BIOMASS BOILER PLANT

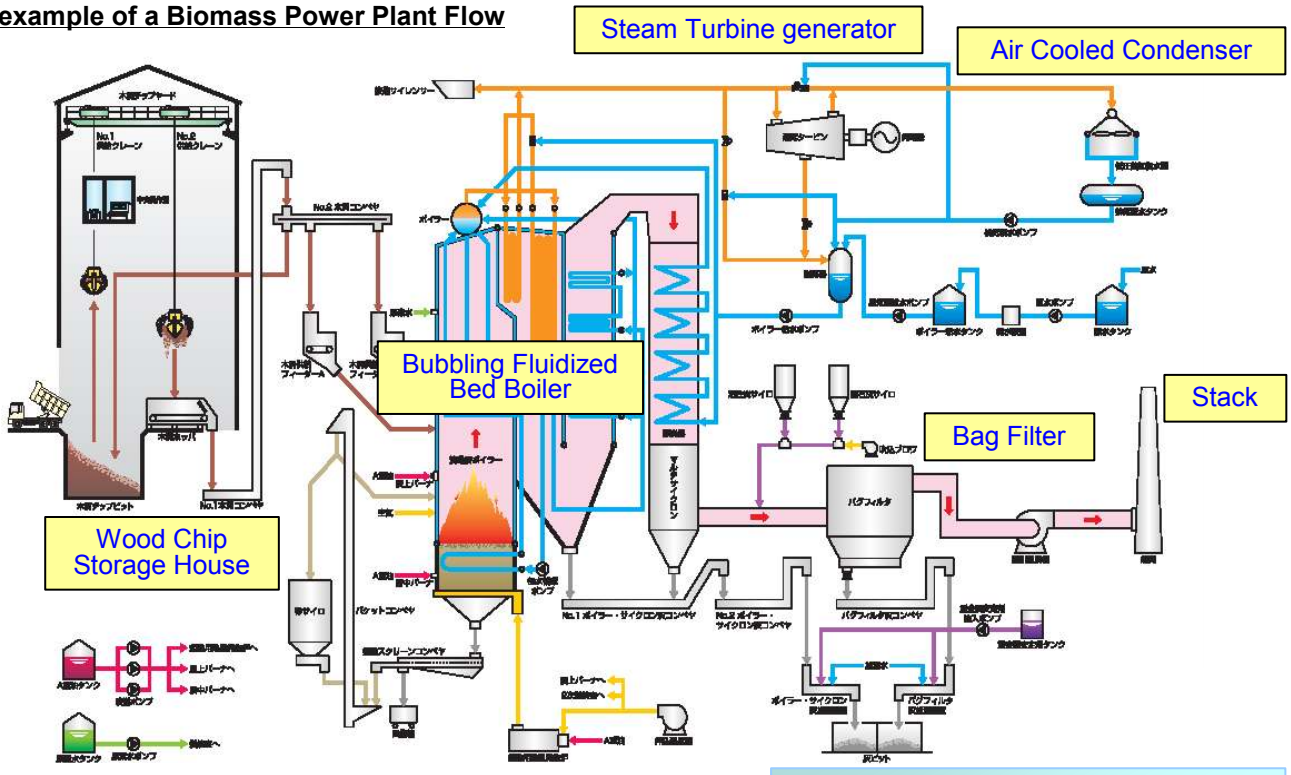
- **Boilers using biomass as fuel**

Features

- **TAKUMA's expertise in environmental engineering has accomplished an efficient combustion technology of hard-to-burn material with high moisture content such as biomass.**
- **TAKUMA has developed several types of combustion systems to match customers' needs.**
- **A great number of designs and technology are incorporated into the power plant with fuel moisture content even to achieve an efficient power generation and a stable power supply.**

Overview (Technical principles, actions, etc.)

An example of a Biomass Power Plant Flow

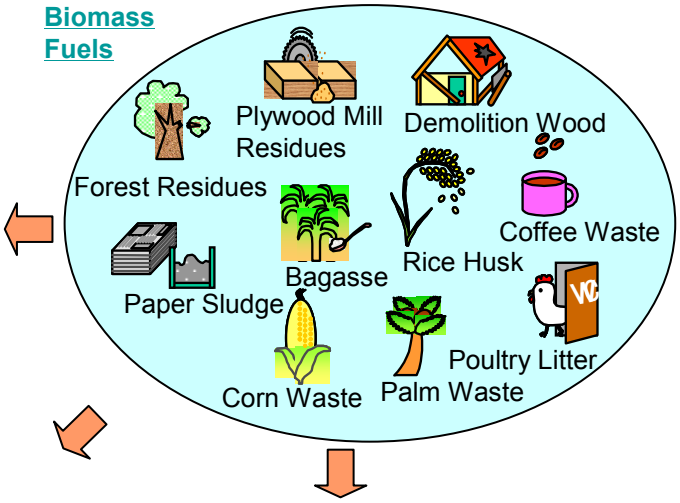


Boiler :	N-1000FH Bubbling Fluidized Bed boiler	
Max. Steam Pressure	:	7.2 MPa
Nor. Steam Pressure	:	6.0 MPa
Steam Temperature	:	425 deg-C
Steam Generation	:	25.5 ton/h
Feed Water Temp.	:	143 deg-C
Power Output	:	4,900 kW

Introductory Track Record

- **More than 500 units**

Bagasse Fired Boiler Plant
Thailand



Rubber Wood Fired Boiler Plant
Thailand
23,000 kW

Wood Waste Fired Boiler Plant
Hiroshima Prefecture, Japan
5,000 kW

Effects

Biomass fuel is :

- **Regenerative Energy**
  Plants continue to grow as long as existence of sun light, water and soil. Efficient use of biomass energy is applauded as fossil fuels become depleted.
- **Earth-friendly Energy**
  Plants absorb CO_2 in the growing process. Rich, green forests thus help prevent global warming.
- **Regenerative Energy**
  Agro-forestry wastes previously disposed of are recovered as fuel energy. This forms a recycling type community with reduced waste generation and efficient energy use.

Inquiries
TAKUMA CO., LTD.
INTERNATIONAL OPERATIONS DIVISION

URL : http://www.takuma.co.jp/english/
E-mail : international@takuma.co.jp
2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6483-2630 FAX +81-6-6483-2637