

Energy from Waste Reference Projects

by Hitachi Zosen since 2000

in chronological order

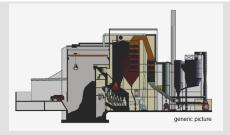


JP, Yokosuka, Kanagawa

Start of operation Combustion

2020 Concept Fuel

Fuel Municipal Solid Waste
Number of Lines 3
Throughput per line 5.00 t/h



CN, Shunde

Start of operation 2019
Combustion Concept

Fuel
Number of Lines
Throughput per line

Energy recovery Output

Air-cooled Grate

Air-cooled Grate

Municipal Solid Waste 4

35.42 t/h Electrical Power



JP, Kyoto (Nambu No.2)

Start of operation 2019 Combustion Concept

Fuel

Number of Lines 2
Throughput per line 10
Thermal power per line 39

Energy recovery Output

Air-cooled Grate Municipal Solid Waste

10.42 t/h 39.06 MW Electrical Power

Output Electrical Pov



JP, Nagano, Nagano

Start of operation 2019 Combustion Conce

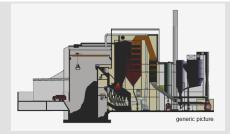
Concept Fuel

> Number of Lines Throughput per line Thermal power per line

Air-cooled Grate Municipal Solid Waste

3 5.60 t/h 17.90 MW

Energy recovery Output Electrical Power



CN, Changsha

Energy recovery

Start of operation 2018 Combustion Cond

Concept Fuel

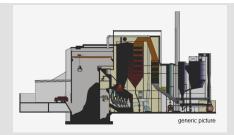
Refuse Derived Fuel, Municipal

Solid Waste

Air-cooled Grate

Number of Lines 6

Throughput per line 35.42 t/h
Output Electrical Power



TH, Nong Khai

Start of operation Combustion

2018 Concept Fuel

Number of Lines Throughput per line

Output

Air-cooled Grate

Air-cooled Grate

15.42 t/h Electrical Power

Municipal Solid Waste



JP, Orii

Start of operation Combustion

Energy recovery

2018 Concept Fuel Number of Lines

Municipal Solid Waste Throughput per line 2.40 t/h



JP, Yatsushiro, Kumamoto

Start of operation Combustion

2018 Concept Fuel

Municipal Solid Waste Number of Lines Throughput per line 2.79 t/h Thermal power per line 9.93 MW

Energy recovery Concept

Electric power output Output

Condensation Turbine 2.88 MW (gross) **Electrical Power**

Air-cooled Grate



JP, Neyagawa

Energy recovery

Start of operation 2018 Combustion

Air-cooled Grate Concept Fuel Municipal Solid Waste

Number of Lines Throughput per line 4.17 t/h Thermal power per line 13.60 MW

Flue gas treatment Concept

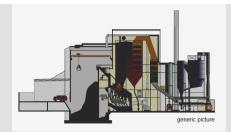
Reactant

Entrainment reactor, Fabric Filter,

SCR Calcium Hydroxide, Activated

Carbon

23'990 m3/h (STP) Throughput per line Output **Electrical Power**



MY, SMART WTE

Start of operation 2018 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 1
Throughput per line 25.00 t/h
Thermal power per line 69.44 MW

Energy recovery Concept

Concept Condensation Turbine
Electric power output 17.70 MW (gross)
Output Electrical Power



CN, Chengdu Wanxing

Start of operation 2017

Combustion Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 4
Throughput per line 25.00 t/h
Thermal power per line 48.60 MW

Flue gas treatment Concept

Concept Fabric Filter, SCR, Semi-dry
System, SNCR, PAC Entrainment
Reactant Calcium Hydroxide, Sodium
Bicarbonate, Activated Carbon

Energy recovery Output Electrical Power



JP, Joetsu, Niigata

Start of operation 2017
Combustion Concept

2017

Fuel Municipal Solid Waste
Number of Lines 2
Throughput per line 3.54 t/h

Throughput per line 3.54 t/h
Thermal power per line 15.60 MW
Flue gas treatment Concept SNCR, Entrainment reactor, Fabric

Reactant Calcium Hydroxide, Activated

Carbon

Water-cooled Grate

Throughput per line 20'330 m³/h (STP)

Energy recovery Output Hot Water, Electrical Power



IE, DublinStart of operation

Energy recovery

Combustion Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2
Throughput per line 41.00 t/h
Thermal power per line 102.5 MW

Boiler Concept 4-pass boiler Steam 125 t/h at 62

Steam 125 t/h at 62 bar(a) and 443 °C Flue gas treatment Concept Fabric Filter, Scrubber, Semi-dry

System, SNCR Scrubber Reactant Caustic Soda

Reactant Lignite Coke, Calcium Hydroxide

Throughput per line 189'000 m³/h (STP)

Concept Condensation Turbine

Electric power output 68.80 MW (gross)

Output Electrical Power, Hot Water



GB, Herefordshire and Worcestershire

Start of operation 2017 Combustion Cond

Combustion Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 1

Throughput per line 30.55 t/h
Thermal power per line 67.89 MW

Boiler Concept 5-pass boiler Steam 5-pass boiler 89 t/h at 60 bar(a) and 415 °C

Flue gas treatment Concept Fabric Filter, Semi-dry System,

SNCR

Reactant Calcium Hydroxide, Activated

Carbon

Throughput per line 126'000 m³/h (STP)
Energy recovery Concept Condensation Turbine

Electric power output 20.00 MW (gross)
Output Electrical Power



CN, Xiamen (Ruikeji)

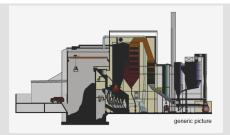
Start of operation 2017 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 1

Throughput per line 10.42 t/h
Thermal power per line 24.05 MW

Flue gas treatment Concept

Throughput per line 54'257 m³/h (STP)



CN, Yingtan

Start of operation 2017

Combustion Concept Fuel Air-cooled Grate Municipal Solid Waste

Number of Lines 1
Throughput per line 16.67 t/h
Thermal power per line 25.20 MW

Flue gas treatment Concept

Throughput per line 63'115 m³/h (STP)



CN, Guangan

Start of operation 2017

Combustion Concept Air-cooled Grate
Fuel Municipal Solid Waste

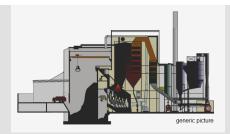
Number of Lines 2 Throughput per line 12.50 t/h Thermal power per line 23.26 MW

Flue gas treatment Concept

Throughput per line 55'266 m³/h (STP)

Air-cooled Grate

Municipal Solid Waste



CN, Chongming

Start of operation 2017
Combustion Concept
Fuel

Number of Lines 2

Throughput per line 10.42 t/h
Thermal power per line 18.78 MW

Flue gas treatment Concept

Throughput per line 44'189 m³/h (STP)



CN, Haikou Phase II

Start of operation 2017 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 2

Throughput per line 25.00 t/h
Thermal power per line 49.31 MW

Flue gas treatment Concept

Throughput per line 115'540 m³/h (STP)



JP, Tokyo (Suginami)

Start of operation 2017 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 2

Throughput per line 12.50 t/h
Thermal power per line 49.70 MW

Energy recovery Output Hot Water, Electrical Power



PL, Poznan

Start of operation 2016
Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 2

Throughput per line 15.00 t/h
Thermal power per line 31.50 MW

Boiler Concept 4-pass boiler Steam 38 t/h at 62 bar(a) and 422 °C

Flue gas treatment Concept SNCR, Semi-dry System, Fabric

F

Reactant Calcium Hydroxide Throughput per line 66'000 m³/h (STP)

Energy recovery Concept Condensation Turbine Electric power output 17.30 MW (gross)

Output Electrical Power, Hot Water



GB, Severnside L1, L2

Start of operation 2016 Combustion Concept

Air-cooled Grate Municipal Solid Waste Fuel

Number of Lines 24.24 t/h Throughput per line

Thermal power per line 62.61 MW Concept 5-pass boiler

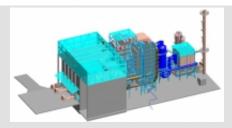
Boiler 78 t/h at 62 bar(a) and 422 °C Steam

Flue gas treatment Concept SNCR, Semi-dry System, Fabric

Reactant

Calcium Hydroxide 127'000 m³/h (STP) Throughput per line Condensation Turbine Concept

Electric power output 37.40 MW (gross) Output Electrical Power



IN, Essel Jabalpur

Energy recovery

Start of operation 2016 Combustion Concept

Fuel Municipal Solid Waste Number of Lines Throughput per line 25.00 t/h 47.97 MW

Thermal power per line Concept 4-pass boiler Boiler

Steam 57 t/h at 46 bar(a) and 0 °C Evaporation cooler, Fabric Filter Flue gas treatment Concept Reactant Calcium Hydroxide, Activated

Carbon

Air-cooled Grate

Throughput per line 112'178 m3/h (STP)



JP, Fujimino, Saitama

Start of operation 2016 Combustion

Concept Air-cooled Grate Fuel Municipal Solid Waste

Number of Lines Throughput per line 3.00 t/h 10.30 MW Thermal power per line Hot Water, Electrical Power

Energy recovery Output



JP, Tsuyama, Okayama

Start of operation 2016 Combustion Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line 2.67 t/h Thermal power per line 9.40 MW



CN, Wuxi Xidong

Start of operation 2016 Combustion Concept

Air-cooled Grate Municipal Solid Waste Fuel

Number of Lines 20.83 t/h Throughput per line Thermal power per line 38.77 MW

Concept Flue gas treatment

SNCR, Spray Absorber, Fabric

Reactant Activated Carbon, Calcium

Hydroxide

100'950 m³/h (STP) Throughput per line **Electrical Power** Output



PL, Jarocin

Energy recovery

Start of operation 2015

Anaerobic Digestion Number of Digester(s)

1300 m3 Net volume per digester Digester Design Concrete RM18 Digester Type

Organic Fraction of Municipal Solid Waste Type

Waste

15000 t/a Waste Throughput per Year



CN, Yongji

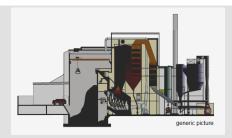
Start of operation Combustion

2015 Concept Fuel

Number of Lines

Air-cooled Grate Municipal Solid Waste

10.40 t/h Throughput per line



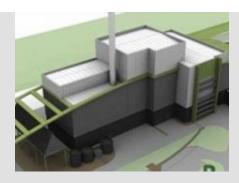
TH, Nonkhem

Start of operation Combustion

2015 Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines 10.40 t/h Throughput per line



GB, Buckinghamshire

Start of operation 2015 Combustion Air-cooled Grate Concept

Fuel Municipal Solid Waste, Industrial

Waste

Number of Lines

Throughput per line 39.40 t/h Thermal power per line 101.7 MW

Boiler Concept 5-pass boiler Steam 127 t/h at 52 bar(a) and 402 °C

> Concept Fabric Filter, Semi-dry System,

Activated Carbon, Calcium Reactant

Hydroxide 180'714 m³/h (STP)

Throughput per line Energy recovery Concept

Condensation Turbine 26.50 MW (gross) Electric power output

Output **Electrical Power**



JP, Namie

Flue gas treatment

Start of operation 2015 Combustion Concept Air-cooled Grate Radioactive waste Fuel

Number of Lines

Throughput per line 12.50 t/h Thermal power per line 45.00 MW

Flue gas treatment Concept Entrainment reactor, Fabric Filter

Calcium Hydroxide, Activated Reactant

Carbon

154'040 m³/h (STP) Throughput per line



CH, Horgen

Start of operation 2015 Combustion Concept Water-cooled Grate Fuel Municipal Solid Waste

Number of Lines

4.20 t/h Throughput per line Thermal power per line 15.00 MW

Boiler Concept 3-pass boiler with external

economizer

18 t/h at 30 bar(a) and 0 °C Steam Entrainment reactor, Electrostatic Flue gas treatment Concept Precipitator, Fabric Filter, Heat

exchanger, SCR

Adsorbent, Sodium Bicarbonate Reactant

Throughput per line 25'300 m3/h (STP)



GB, Ferrybridge

Start of operation 2015
Combustion Concept Water-cooled Grate

Fuel Municipal Solid Waste, Biomass,

Refuse Derived Fuel, Wood

Number of Lines 2

Throughput per line 42.25 t/h
Thermal power per line 117.4 MW

Boiler Concept 5-pass boiler Steam 104 t/h at 72

Steam 104 t/h at 72 bar(a) and 427 °C
Flue gas treatment Concept Fabric Filter, Heat Exchanger, Semi-

dry System, SNCR
Reactant Activated Carbon, Calcium

Hydroxide

Throughput per line

Energy recovery Concept

Concept Condensation Turbine
Electric power output 75.00 MW (gross)
Output Steam, Electrical Power



JP, Hagi Nagato, Yamaguchi

Start of operation 2015 Combustion Fuel

> Number of Lines Throughput per line Thermal power per line

Energy recovery Output

Municipal Solid Waste

208'000 m3/h (STP)

2 2.16 t/h 4.75 MW Hot Water



JP, Gotemba Oyama, Shizuoka

Start of operation 2015 Combustion Fuel Munic

Fuel Municipal Solid Waste
Number of Lines 2
Throughput per line 2.97 t/h
Thermal power per line 9.80 MW

Energy recovery Output

Output Electrical Power



JP, Murakami, Niigata

Start of operation 2015

Combustion Fuel Municipal Solid Waste, Sewage Sludge

Number of Lines 2
Throughput per line 1.96 t/h
Thermal power per line 6.10 MW

Energy recovery Output

Hot Water, Electrical Power



CN, Nanchong

Start of operation 2015

Combustion Concept Fuel

Municipal Solid Waste Number of Lines

16.66 t/h Throughput per line Thermal power per line 31.98 MW

Flue gas treatment Concept SNCR, Spray Absorber, Fabric

Activated Carbon, Calcium Reactant

Hydroxide

Air-cooled Grate

Throughput per line 83'230 m3/h (STP) **Electrical Power** Output



CN, Xiamen West

Energy recovery

Start of operation 2015

Combustion

Concept Air-cooled Grate Fuel Municipal Solid Waste

Number of Lines 2 Throughput per line 12.50 t/h Thermal power per line 20.10 MW

Concept Flue gas treatment

SNCR, Spray Absorber, Fabric

Calcium Hydroxide, Activated Reactant

Carbon

54'170 m3/h (STP) Throughput per line **Electrical Power**



CH, Lucerne Perlen

Start of operation Combustion

Energy recovery

2015 Concept Fuel

Water-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

Throughput per line

15.60 t/h Thermal power per line 47.00 MW

Boiler Concept 4-pass boiler with external

economizer

Flue gas treatment Concept

Steam 57 t/h at 41 bar(a) and 410 °C

Entrainment reactor, Entrainment reactor 2, Electrostatic Precipitator, Ext. Eco, Fabric Filter, Fabric Filter 2, Heat Exchanger, Heat exchanger

2, SCR

Reactant Sodium Bicarbonate, Lignite Coke,

Calcium Hydroxide 78'000 m3/h (STP)

Energy recovery Concept

Condensation Turbine 28.10 MW (gross)

Electric power output Output Steam, Electrical Power, Hot Water





CN, Shanghai Liming

Start of operation 2014 Combustion Conc

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines

Throughput per line 20.83 t/h
Thermal power per line 37.62 MW

Flue gas treatment Concept SNCR, Entrainment reactor, Fabric

Filter, Scrubber

Reactant Calcium Hydroxide, Activated

Carbon

Throughput per line 103'810 m³/h (STP)
Output Electrical Power



CN, Xiangtan

Energy recovery

Start of operation 2014 Combustion Conce

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 4
Throughput per line 20.83 t/h

Flue gas treatment Concept Entrainment reactor, Fabric Filter,

Semi-dry System



CN, Sanya

Start of operation 2014 Combustion Conc

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2 Throughput per line 14.58 t/h

Flue gas treatment Concept Enti

Entrainment reactor, Semi-dry System, Fabric Filter



CN, Shanghai Laogang

Start of operation 2014 Combustion Conc

Energy recovery

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 4

Throughput per line 31.25 t/h
Thermal power per line 61.80 MW

Flue gas treatment Concept SNCR, Entrainment reactor, Fabric

Filter, Scrubber

Reactant Calcium Hydroxide, Activated

Carbon

Throughput per line 161'900 m³/h (STP)
Output Electrical Power



CN, Harbin

Start of operation 2014 Combustion Concept

Air-cooled Grate Municipal Solid Waste Fuel

Number of Lines

25.00 t/h Throughput per line

Flue gas treatment Concept Semi-dry System, Fabric Filter



JP, Bekki Hayami, Oita

Start of operation 2014 Combustion

Fuel

Number of Lines Throughput per line

Municipal Solid Waste 2

4.90 t/h Thermal power per line 14.60 MW **Electrical Power**

Output Energy recovery



CN, Tianjin Binghai

Start of operation 2014 Combustion

Concept

Air-cooled Grate Municipal Solid Waste

Fuel Number of Lines

Throughput per line

Thermal power per line Concept

38.80 MW SNCR, Spray Absorber, Fabric

20.83 t/h

Reactant Calcium Hydroxide, Activated

Throughput per line

Carbon 100'250 m3/h (STP)

Output

Electrical Power

Energy recovery

Flue gas treatment



CN, Zhuzhou

Start of operation 2014 Combustion

Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

20.83 t/h

Concept Flue gas treatment

Entrainment reactor, Semi-dry

System, Fabric Filter





CN, Rongcheng

Start of operation 2014 Combustion Concept

Fuel Municipal Solid Waste Number of Lines 2

Throughput per line 14.58 t/h
Flue gas treatment Concept Entrainment reactor, Fabric Filter,

Semi-dry System

Air-cooled Grate



CN, Shuyang

Start of operation 2014 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 2

Throughput per line 14.58 t/h

Flue gas treatment Concept Semi-dry System, Fabric Filter



CN, Xingyi

Start of operation 2014

Combustion Concept
Fuel

oncept Air-cooled Grate
uel Municipal Solid Waste

Number of Lines 2 Throughput per line 2.50 t/h

Flue gas treatment Concept Semi-dry System, Entrainment

reactor, Fabric Filter



FI, Vantaa

Start of operation 2014 Combustion Conce

Concept Water-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2
Throughput per line 24.00 t/h
Thermal power per line 64.20 MW

Boiler Concept 4-pass boiler with external

economizer

Steam 83 t/h at 91 bar(a) and 400 °C

Flue gas treatment Concept SNCR

Throughput per line 111'100 m³/h (STP)



CN, Dalian

Start of operation 2014 Combustion Concept

Fuel Municipal Solid Waste Number of Lines 3

Throughput per line 20.83 t/h
Thermal power per line 38.80 MW

Flue gas treatment Concept

SNCR, Spray Absorber, Fabric

ilter

Reactant Activated Carbon, Calcium

Hydroxide

Air-cooled Grate

Throughput per line 100'250 m³/h (STP)
Output Electrical Power



CH, Winterthur

Energy recovery

Start of operation 2014

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1500 m3 Digester Design Steel Digester Type PF1500

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 25000 t/a



CH, Vétroz

Start of operation 2014

Anaerobic Digestion Number of Digester(s)

Net volume per digester1300 m3Digester DesignConcreteDigester TypePF1300

Waste Type Bio Waste, Green Waste, Liquid

Manure, Waste Oil

Waste Throughput per Year 20000 t/a



PT, Amarsul

Start of operation 2014

Anaerobic Digestion Nu

Number of Digester(s) 3
Net volume per digester 1300 m3
Digester Design Concrete
Digester Type PF1300

Waste Type Organic Fraction of Municipal Solid

Waste

Waste Throughput per Year 60000 t/a



PL, Olawa

Start of operation 2014



KR, Namyangju

Start of operation 2013 Combustion Concept

Fuel
Number of Lines
Throughput per line

Fluidized Bed Gasification Municipal Solid Waste

1 2.66 t/h



CN, Yantai

Start of operation 2013
Combustion Concept
Fuel

Number of Lines

Throughput per line 20.83 t/h
Flue gas treatment Concept Entrainme

Entrainment reactor, Fabric Filter, Semi-dry System

Air-cooled Grate

Municipal Solid Waste



JP, Nishiharima, Hyogo

Start of operation 2013 Combustion Fuel

Fuel
Number of Lines
Throughput per line

Thermal power per line

Energy recovery Output

Municipal Solid Waste

2 1.85 t/h 5.80 MW

Electrical Power, Hot Water



JP, Matsuyama, Ehime

Start of operation 2013

Combustion Fuel

Number of Lines Throughput per line Thermal power per line

Energy recovery Output

Municipal Solid Waste

5.83 t/h 16.90 MW

Electrical Power

3-pass boiler



JP, Nakakita Sorachi, Hokkaido

Start of operation 2013 Combustion Fuel

Fuel Municipal Solid Waste
Number of Lines 2
Throughput per line 1.77 t/h
Thermal power per line 8.20 MW

Boiler Concept

Steam

Energy recovery Output Electrical Power



JP, Hadano Isehara, Kanagawa

Start of operation 2013 Combustion Fuel

Fuel Municipal Solid Waste
Number of Lines 2
Throughput per line 4.16 t/h
Thermal power per line 13.30 MW
Output Electrical Power

Energy recovery Output



CN, Haikou

Start of operation 2013 Combustion Conc

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2

Throughput per line 25.00 t/h
Thermal power per line 46.00 MW

Flue gas treatment Concept SNCR, Semi-dry System, Fabric

Filter

Reactant Calcium Hydroxide, Activated

Carbon

Throughput per line 121'220 m³/h (STP)
Output Electrical Power



CN, Rudong II

Energy recovery

Start of operation 2013 Combustion Conce

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines

Throughput per line 20.83 t/h

Flue gas treatment Concept Entrainment reactor, Fabric Filter

Semi-dry System, Fabric Filter



CN, Changshou

Start of operation 2013 Combustion Concept

Air-cooled Grate Fuel Municipal Solid Waste

Number of Lines

12.50 t/h Throughput per line

Flue gas treatment Concept



CN, Longyan

Start of operation 2013 Combustion Concept

Air-cooled Grate Fuel Municipal Solid Waste Number of Lines

Throughput per line 12.50 t/h

Entrainment reactor, Semi-dry Flue gas treatment Concept

System, Fabric Filter



GB, Cleveland L4, L5

Start of operation 2013 Combustion Concept

Air-cooled Grate Fuel

Municipal Solid Waste, Industrial

Waste Number of Lines 2 Throughput per line 19.00 t/h 45.85 MW Thermal power per line

Boiler Concept 4-pass boiler Steam 56 t/h at 50 bar(a) and 410 °C

Flue gas treatment Concept Fabric Filter, Semi-dry System, **SNCR**

> Activated Carbon, Calcium Reactant

Hydroxide

Throughput per line 95'400 m3/h (STP) Energy recovery

Concept Condensation Turbine Electric power output 26.00 MW (gross) **Electrical Power**

Output



JP, Hofu

Start of operation

Anaerobic Digestion

Number of Digester(s)

Net volume per digester 750 m3 Steel Digester Design Digester Type ZAFL

Organic Fraction of Municipal Solid Waste Type

Waste

Waste Throughput per Year 17500 t/a



JP, Nantan

Start of operation

2013



DE, Fulda

Start of operation 2013

Anaerobic Digestion

Number of Digester(s) Net volume per digester Digester Design

Digester Type Waste Type

Waste Throughput per Year

1300 m3 Concrete PF1300

1300 m3

Concrete

Bio Waste, Green Waste

32000 t/a



NL, Tilburg

Start of operation Anaerobic Digestion 2013

Number of Digester(s) Net volume per digester Digester Design Digester Type

PF1300

Waste Type Bio Waste, Green Waste Waste Throughput per Year

46000 t/a



CH, Zurich Werdhölzli

Start of operation 2013

Anaerobic Digestion

Number of Digester(s)

Net volume per digester Digester Design Digester Type

Waste Type

Waste Throughput per Year 25000 t/a

1500 m3 Steel PF1500



FR, Clermont-Ferrand

Start of operation 2013

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1300 m3 Digester Design Concrete PF1300 Digester Type

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 15000 t/a



CN, Huzhou

Start of operation 2012 Concept Combustion

Fuel

Number of Lines Throughput per line

Concept

Flue gas treatment

Output

Air-cooled Grate

Municipal Solid Waste

8.33 t/h Fabric Filter, Semi-dry System,

SNCR

Electrical Power



FI, Vaasa

Boiler

Energy recovery

Start of operation 2012 Combustion

Concept Fuel

Water-cooled Grate

Municipal Solid Waste, Industrial

Waste

Number of Lines

20.00 t/h Throughput per line Thermal power per line 61.00 MW Concept 4-pass boiler

Steam

Concept

SNCR Throughput per line

Energy recovery Output 104'140 m³/h (STP) Hot Water, Electrical Power

74 t/h at 42 bar(a) and 402 °C



CH, Hinwil

Flue gas treatment

Start of operation Flue gas treatment 2012 Concept

Number of Lines

Fuel Reactant

Municipal Solid Waste Sodium Bicarbonate, Activated

Heat Exchanger, SCR

Entrainment reactor, Fabric Filter,

Carbon

Throughput per line 87'500 m3/h (STP)



ES, Sant Adrià de Besòs L1-L3

Start of operation 2012 Combustion

Concept

Fuel

Air-cooled Grate Municipal Solid Waste, Industrial

Waste

Number of Lines Throughput per line Thermal power per line

15.00 t/h 48.80 MW 3-pass boiler

Concept

50 t/h at 40 bar(a) and 400 °C

Boiler

Steam

a company of Hitachi Zosen Corporation



CN, Ningde

Start of operation Combustion

2012 Concept Fuel

> Number of Lines Throughput per line

Concept Flue gas treatment

Air-cooled Grate

Municipal Solid Waste

12.50 t/h

Entrainment reactor, Semi-dry System, Fabric Filter



TH, Phuket

Start of operation Combustion

Flue gas treatment

2012 Concept Fuel Number of Lines Throughput per line

Concept

Air-cooled Grate

Municipal Solid Waste

14.58 t/h Semi-dry System, Fabric Filter



CH, Limmattal

Start of operation Flue gas treatment 2012 Concept Number of Lines

Fuel Reactant Throughput per line **PAC Entrainment**

Municipal Solid Waste Activated Carbon 47'000 m3/h (STP)



FR, Vannes

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design Digester Type

Waste Type

1300 m3 Concrete PF1300

Organic Fraction of Municipal Solid

Waste

Waste Throughput per Year 15000 t/a



FR, Angers

Start of operation Anaerobic Digestion 2012

Number of Digester(s) 1300 m3 Net volume per digester Digester Design Concrete PF1300 Digester Type

Waste Type Organic Fraction of Municipal Solid

Waste

Waste Throughput per Year 50000 t/a



FR, Forbach

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester 1300 m3 Digester Design Concrete Digester Type PF1300

Bio Waste, Green Waste Waste Type

Waste Throughput per Year 42000 t/a



DE, Witten

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester 1300 m3 Digester Design Concrete Digester Type PF1300

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 20000 t/a



DE, Trittau

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design

PF1300 Digester Type Waste Type Bio Waste

Waste Throughput per Year 20000 t/a



IT, Faedo

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design Digester Type

Waste Type Waste Throughput per Year

Bio Waste, Green Waste

32000 t/a

1300 m3

Concrete

PF1300

1300 m3

Concrete





IT, Terni

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design Digester Type Waste Type

1300 m3 Concrete PF1300

Bio Waste, Green Waste Waste Throughput per Year

17500 t/a



NL, Weurt

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design Digester Type Waste Type

1300 m3 Concrete

PF1300 Bio Waste, Green Waste

Waste Throughput per Year 40000 t/a



IT, Novi Ligure

Start of operation

2012



DE, Coesfeld

Start of operation Anaerobic Digestion 2012

Number of Digester(s) Net volume per digester Digester Design Digester Type Waste Type

Bio Waste, Green Waste

Waste Throughput per Year

40000 t/a

1300 m3

Concrete

PF1300

Air-cooled Grate

Water-cooled Grate



GB, Newhaven

Start of operation 2011

Combustion Concept Fuel

Municipal Solid Waste Number of Lines

14.50 t/h Throughput per line Thermal power per line 35.85 MW

Concept 4-pass boiler Boiler

Steam 44 t/h at 50 bar(a) and 400 °C Flue gas treatment Concept Semi-dry System, Fabric Filter,

SNCR

Throughput per line 75'600 m³/h (STP)

Energy recovery Concept Condensation Turbine

19.25 MW (gross) Electric power output Output **Electrical Power**



NO, Oslo

Flue gas treatment

Energy recovery

Start of operation 2011 Combustion

Concept Fuel

Municipal Solid Waste, Industrial

Waste

Number of Lines Throughput per line 24.00 t/h 66.70 MW Thermal power per line 4-pass boiler

Concept Boiler

Steam 78 t/h at 42 bar(a) and 402 °C Electrostatic Precipitator (3 Fields), Concept Heat Exchanger, Scrubber, Heat

exchanger, Heat exchanger 2, Heat exchanger 3, SCR, Heat exchanger

Scrubber Reactant Lye 130'000 m3/h (STP)

Throughput per line

Concept

Back-pressure Turbine

12.80 MW (gross) Electric power output

Output Hot Water, Electrical Power



JP, Iwata Bannan II, Shizuoka

Start of operation 2011 Fuel

Combustion

Number of Lines

Throughput per line Thermal power per line

Energy recovery Output Municipal Solid Waste

4.67 t/h

3.00 MW

Hot Water, Electrical Power



GB, Riverside, London

Start of operation 2011 Combustion Concept

Air-cooled Grate Municipal Solid Waste, Industrial Fuel

Waste

Number of Lines 3

32.44 t/h Throughput per line 81.10 MW Thermal power per line

Boiler Concept 4-pass boiler Steam

99 t/h at 72 bar(a) and 427 °C Concept SNCR, Semi-dry System, Fabric Flue gas treatment

Throughput per line 169'800 m3/h (STP)

Energy recovery Concept

Condensation Turbine Electric power output 73.00 MW (gross) Output Electrical Power



NL, Roosendaal

Start of operation 2011 Combustion Concept Water-cooled Grate Fuel Municipal Solid Waste

Number of Lines Throughput per line 21.00 t/h 62.00 MW Thermal power per line

Concept 5-pass boiler Boiler Steam

76 t/h at 62 bar(a) and 422 °C Entrainment reactor, Fabric Filter, Flue gas treatment Concept

Sodium Bicarbonate Reactant 127'000 m³/h (STP)

Throughput per line Concept Condensation Turbine Electric power output 28.70 MW (gross)

Hot Water, Electrical Power Output

Spray Dryer, Fabric Filter, Scrubber



DE, Neunkirchen EEW

Start of operation 2011

Energy recovery

Flue gas treatment Concept

Number of Lines

Municipal Solid Waste 50'000 m³/h (STP) Throughput per line



FR, Noyelles s/Lens

Start of operation 2011 Combustion

Concept Air-cooled Grate Fuel

Municipal Solid Waste Number of Lines

Throughput per line 8.00 t/h 16.70 MW Thermal power per line Concept SNCR

Flue gas treatment

Throughput per line 35'000 m3/h (STP)



CN, Rudong

Start of operation Combustion

2011 Concept Fuel

2011

Number of Lines

Throughput per line

Flue gas treatment Concept Air-cooled Grate Municipal Solid Waste

10.42 t/h Entrainment reactor, Fabric Filter



CN, Xiangyang

Start of operation Combustion

Concept Fuel Number of Lines

Throughput per line

Flue gas treatment Concept Air-cooled Grate

16.67 t/h

Municipal Solid Waste

Semi-dry System, Fabric Filter



IT, Belluno

Start of operation Anaerobic Digestion 2011

Number of Digester(s) Net volume per digester

Digester Design Digester Type Waste Type

PF1300 Bio Waste, Green Waste, Food

Waste

1300 m3

Concrete

Waste Throughput per Year 22000 t/a



DE, Ennigerloh

Start of operation 2011

Anaerobic Digestion

Number of Digester(s)

Net volume per digester Digester Design Digester Type Waste Type

Waste Throughput per Year

1300 m3 Concrete PF1300

Bio Waste, Green Waste

20000 t/a



DE, Backnang-Neuschöntal

Start of operation

Anaerobic Digestion

Number of Digester(s)

Net volume per digester Digester Design Digester Type Waste Type

Bio Waste, Green Waste

Waste Throughput per Year

36000 t/a

1300 m3

Concrete

PF1300



CH, Wauwil

Start of operation Anaerobic Digestion 2011

Digester Type

Number of Digester(s) Net volume per digester Digester Design

1300 m3 Concrete PF1300

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 16000 t/a



CH, Chavornay

Start of operation Anaerobic Digestion 2011 Number of Digester(s)

Net volume per digester 1500 m3 Digester Design Steel Digester Type PF1500

Waste Type Bio Waste, Green Waste, Food

Waste

Waste Throughput per Year 23000 t/a



DE, Ingolstadt

Start of operation Anaerobic Digestion 2011

Number of Digester(s) 1300 m3 Net volume per digester Digester Design Concrete

Digester Type PF1300

Waste Type Bio Waste, Green Waste 20000 t/a

Waste Throughput per Year



DE, Aurich-Grossefehn

Start of operation Anaerobic Digestion 2010

Number of Digester(s) Net volume per digester Digester Design Digester Type

1300 m3 Concrete PF1300

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 18000 t/a



NL, Rijsenhout

Start of operation 2010



CH, Villeneuve

Start of operation

2010

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1300 m3
Digester Design Concrete
Digester Type PF1300

Waste Type Bio Waste, Green Waste, Food

Waste 20000 t/a

2

Waste Throughput per Year



NL, Zwolle

Start of operation
Anaerobic Digestion

2010

Digestion Number of Digester(s)

Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste
Waste Throughput per Year 45000 t/a



LU, Leudelange TABA

Start of operation 2010

Combustion Concept Water-cooled Grate

Fuel Municipal Solid Waste Number of Lines 1

Throughput per line 22.00 t/h
Thermal power per line 67.00 MW

Boiler Concept 3-pass boiler Steam 79 t/h at 40 bar(a) and 400 °C

Flue gas treatment Concept Entrainment reactor, Fabric Filter,

Reactant Sodium Bicarbonate, Lignite Coke

Throughput per line 136'642 m³/h (STP) ecovery Output Electrical Power

Energy recovery



US, Olmsted L5, MN

Start of operation 2010

Combustion Concept Air-cooled Grate

Fuel Municipal Solid Waste, Waste Oil

Number of Lines 1
Throughput per line 7.93 t/h
Thermal power per line 23.30 MW

Boiler Concept 2-pass boiler Steam 29 t/h at 44 bar(a) and 346 °C

Flue gas treatment Concept SNCR, Spray Dryer, Fabric Filter

Throughput per line 46'300 m³/h (STP)

Energy recovery Output Electrical Power, Steam

Municipal Solid Waste

2

0.75 t/h

Water Injection



JP, Yamagata, Gifu

Start of operation 2010 Combustion Fuel

Number of Lines

Throughput per line

Concept Boiler

Steam



NO, Bergen L2

2010 Start of operation Combustion Concept

Fuel

Number of Lines Throughput per line 16.00 t/h 44.80 MW Thermal power per line

Concept Boiler

Steam Concept

Fabric Filter, Scrubber, Semi-dry

System, SNCR Caustic Soda

Scrubber Reactant Reactant

Throughput per line

Lignite Coke, Calcium Hydroxide 92'000 m3/h (STP)

4-pass boiler

Water-cooled Grate

Municipal Solid Waste

57 t/h at 43 bar(a) and 402 °C

Output Hot Water, Electrical Power



BE, Intradel

Energy recovery

Flue gas treatment

Start of operation Combustion

Flue gas treatment

2009 Concept Fuel

Water-cooled Grate

Municipal Solid Waste, Sewage

Sludge 23.63 t/h

Number of Lines Throughput per line Thermal power per line 67.10 MW

Boiler Concept 3-pass boiler with external

economizer

Steam 80 t/h at 40 bar(a) and 400 °C

Concept

Electrostatic Precipitator, Ext. Eco,

Throughput per line

SCR, Spray Absorber 141'000 m3/h (STP)



CN, Chengdu Luodai

Start of operation 2009

Combustion Concept

Fuel

Number of Lines

Air-cooled Grate Municipal Solid Waste

Throughput per line

16.70 t/h

Flue gas treatment Concept SNCR, Entrainment reactor, Fabric

Filter

Reactant Activated Carbon, Calcium

Hydroxide

Throughput per line

93'720 m³/h (STP) **Electrical Power**

Energy recovery

Output



KR, Iksan

Start of operation 2009 Combustion Fuel

Number of Lines

Throughput per line Thermal power per line

Energy recovery Output Municipal Solid Waste

2 4.17 t/h 3.90 MW

Electrical Power



JP, Osaka (Higashiyodo)

Start of operation Combustion Fuel

Number of Lines Throughput per line

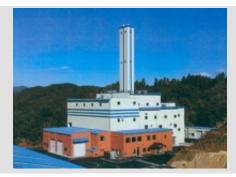
Thermal power per line

Energy recovery

Municipal Solid Waste

8.33 t/h 12.00 MW

Steam, Electrical Power



JP, Aira

Boiler

Boiler

Start of operation 2009 Combustion Fuel

Number of Lines

Throughput per line

Concept Steam

Municipal Solid Waste

1.54 t/h Water Injection



GB, Cleveland L3

Start of operation 2009 Combustion Concept

Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

Thermal power per line 45.80 MW Concept

Steam Flue gas treatment Concept 4-pass boiler 55 t/h at 43 bar(a) and 400 °C Fabric Filter, Semi-dry System,

SNCR

94'600 m³/h (STP)

Condensation Turbine

19.00 t/h

Calcium Hydroxide, Activated Reactant

Carbon

Throughput per line Energy recovery

Concept

Electric power output

10.00 MW (gross) Output **Electrical Power**

Water-cooled Grate

Electrical Power

Water-cooled Grate

68 t/h at 42 bar(a) and 405 °C



AT, Zistersdorf

Start of operation 2009

Combustion Concept Fuel

Fuel Municipal Solid Waste Number of Lines 1

Throughput per line 19.79 t/h
Thermal power per line 57.80 MW

Boiler Concept 4-pass boiler

Steam
Flue gas treatment Concept

ent Concept Entrainment reactor, Fabric Filter,

3

Reactant Sodium Bicarbonate
Throughput per line 97'000 m³/h (STP)

Energy recovery Concept Condensation Turbine Electric power output 14.90 MW (gross)

Output



ES, Mallorca

Start of operation 2009
Combustion Concept

Fuel Municipal Solid Waste, Sewage

Sludge Number of Lines 2

Throughput per line 27.00 t/h
Thermal power per line 70.00 MW

Boiler Concept 3-pass boiler Steam 82 t/h at 52 bar(a) and 400 °C

Flue gas treatment Concept Semi-dry System, Fabric Filter,
Heat Exchanger, Heat exchanger 2,

SCR, Heat exchanger Throughput per line SCR, Heat exchanger 142'000 m³/h (STP)

Energy recovery

Output

Electrical Power



CH, Altdorf

Start of operation 2009

Anaerobic Digestion Number of Digester(s)

Net volume per digester 340 m3
Digester Design Steel
Digester Type ZAFS
Waste Type Green Waste
Waste Throughput per Year 5000 t/a



ES, Botarell

Start of operation 2009

Anaerobic Digestion Number of Digester(s) 3
Net volume per digester 1

Net volume per digester1300 m3Digester DesignConcreteDigester TypePF1300

Waste Type Organic Fraction of Municipal Solid

Waste 54000 t/a

Waste Throughput per Year



QA, Doha

Start of operation Anaerobic Digestion 2009

Number of Digester(s)

15 Net volume per digester 1300 m3 Digester Design Concrete PF1300 Digester Type

Waste Type Green Waste, Organic Fraction of

Municipal Solid Waste

Waste Throughput per Year 160000 t/a



CH, Oensingen

Start of operation Anaerobic Digestion 2009

Waste Type

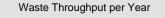
Number of Digester(s) Net volume per digester Digester Design Digester Type

PF1300

Bio Waste, Green Waste, Food

Waste 18000 t/a

1300 m3 Concrete





FR, Saint Lô

Start of operation Anaerobic Digestion 2009

Number of Digester(s) Net volume per digester 1300 m3 Digester Design Concrete Digester Type PF1300

Waste Type Organic Fraction of Municipal Solid

Waste

Waste Throughput per Year 22000 t/a



CH, Volketswil

Start of operation Anaerobic Digestion 2009

Number of Digester(s) 1300 m3 Net volume per digester Digester Design Concrete PF1300 Digester Type

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 20000 t/a



FR, Argenteuil L4

Start of operation Combustion

2008 Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

Thermal power per line

18.15 t/h 48.60 MW 4-pass boiler

Concept Boiler Steam

54 t/h at 47 bar(a) and 380 °C



DE, Witzenhausen

Start of operation 2008

Combustion Concept

Fuel Refuse Derived Fuel, Pulp Sludge

Number of Lines 1

Throughput per line 34.92 t/h
Thermal power per line 125.3 MW

Flue gas treatment Concept

SNCR, Semi-dry System, Fabric

lter

Fluidized Bed

Throughput per line 207'100 m³/h (STP)
Output Steam, Electrical Power



JP, Osumi-kimotsuki, Kagoshima Pref.

Start of operation 2008

Combustion Concept Fluidized Bed Gasification

Fuel

Number of Lines 2
Throughput per line 2.66 t/h



CH, Giubiasco

Energy recovery

Start of operation 2008
Flue gas treatment Concept

Concept Entrainment reactor, Electrostatic
Precipitator (3 Fields), Ext. Eco,
Fabric Filter, Fly Ash Treatment,

Fabric Filter, Fly Ash Treatment, Heat Exchanger, Heat exchanger 2, Heat exchanger 2, Heat exchanger 3, Heat exchanger, SCR, Scrubber

Number of Lines

Fuel Municipal Solid Waste

Scrubber Reactant Caustic Soda
Reactant Lignite Coke
Throughput per line 67'430 m³/h (STP)



FR, Pithiviers

Start of operation 2008
Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste
Number of Lines 2

Throughput per line 4.00 t/h
Thermal power per line 10.90 MW
Concept 4-pass boiler

Boiler Concept 4-pass boiler Steam 4-pass boiler 13 t/h at 40 bar(a) and 380 °C

Flue gas treatment Concept SNCR, Entrainment reactor, Fabric

Filter

Reactant Sodium Bicarbonate
Throughput per line 24'000 m³/h (STP)

Energy recovery Output Steam, Electrical Power



NL, Moerdijk L4

Start of operation 2008

Combustion Concept Fuel

Municipal Solid Waste Number of Lines

38.33 t/h Throughput per line Thermal power per line 95.80 MW 2-pass boiler

Boiler Concept

Steam

Flue gas treatment Concept

121 t/h at 107 bar(a) and 400 °C SNCR, Fabric Filter, Ext. Eco,

Scrubber Lye

Air-cooled Grate

18 t/h at 40 bar(a) and 400 °C

Water-cooled Grate

Scrubber Reactant

Throughput per line 199'200 m3/h (STP) Back-pressure Turbine Concept

Electric power output 13.47 MW (gross) Output Steam, Electrical Power



CN, Xiamen Garbage Treatment

Start of operation 2008 Combustion

Energy recovery

Concept Fuel

Municipal Solid Waste Number of Lines Throughput per line 9.00 t/h 14.65 MW Thermal power per line 3-pass boiler

Concept Boiler

Steam

Concept Flue gas treatment

Semi-dry System, Fabric Filter Throughput per line 42'000 m3/h (STP) Output **Electrical Power**



DE, Flörsheim Wicker

2008 Start of operation

Energy recovery

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1300 m3 Digester Design Concrete Digester Type **GG20**

Bio Waste, Green Waste Waste Type

45000 t/a Waste Throughput per Year



CH, Klingnau

Start of operation 2008

Anaerobic Digestion

Number of Digester(s) Net volume per digester 1300 m3 Digester Design Concrete Digester Type **GG20**

Bio Waste, Food Waste, Green Waste Type

Waste, Liquid Waste

Waste Throughput per Year



CH, Lavigny

Start of operation Anaerobic Digestion 2008

Number of Digester(s) Net volume per digester Digester Design Digester Type Waste Type

960 m3 Concrete GG16

Bio Waste, Green Waste

16000 t/a Waste Throughput per Year



FR, Montpellier

Start of operation 2008



CH, Inwil

Start of operation Anaerobic Digestion 2008

Number of Digester(s) Net volume per digester 960 m3 Digester Design Concrete Digester Type GG16

Waste Type Bio Waste, Green Waste, Liquid Manure, Liquid Waste, Solid

Manure 16000 t/a

Waste Throughput per Year





2008

Anaerobic Digestion

Number of Digester(s) Net volume per digester Digester Design Digester Type

Concrete PF1300

1300 m3

Bio Waste, Green Waste Waste Type

Waste Throughput per Year 60000 t/a



JP, Sano, Tochigi Pref.

Start of operation Combustion

2007 Concept Fuel

Fluidized Bed Gasification Municipal Solid Waste

Number of Lines Throughput per line 5.33 t/h

Water-cooled Grate



NO, Trondheim L3

Start of operation 2007 Combustion Conce

Combustion Concept Fuel

Fuel Municipal Solid Waste Number of Lines 1

Throughput per line 17.29 t/h
Thermal power per line 45.80 MW
Concept 2-pass boiler

Boiler Concept

Steam 911 t/h at 16 bar(a) and 180 °C

Flue gas treatment Concept SNCR, Semi-dry System, Fabric

Filter, Scrubber

Scrubber Reactant Ly

Throughput per line 84'000 m³/h (STP)
Output Hot Water

Energy recovery Output



JP, Toyota, Aichi Pref.

Start of operation 2007 Combustion Cond

Concept Fuel

Number of Lines
Throughput per line

Fluidized Bed Gasification Municipal Solid Waste

3 5.63 t/h



FR, Dunkerque

Start of operation 2007 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 1

Throughput per line 12.00 t/h
Thermal power per line 29.30 MW
Concept 4-pass boiler

Boiler Concept 4-pass boiler Steam 35 t/h at 40 bar(a) and 380 °C

Flue gas treatment Concept SCR, Scrubber
Scrubber Reactant Caustic Soda

Reactant Lignite Coke
Throughput per line 50'000 m³/h (STP)

Energy recovery Concept

Concept Condensation Turbine
Electric power output 6.00 MW (gross)
Output Electrical Power



DE, Stassfurt EVZA

Start of operation Combustion Concept Water-cooled Grate

2007

Fuel Municipal Solid Waste, Industrial

Waste

Number of Lines

Throughput per line 22.50 t/h 55.60 MW Thermal power per line

Boiler Concept 4-pass boiler Steam

64 t/h at 40 bar(a) and 400 °C Concept SNCR, Semi-dry System, Fabric Flue gas treatment

Condensation Turbine

Water-cooled Grate

Throughput per line 116'000 m3/h (STP)

Energy recovery Concept

Electric power output 28.14 MW (gross) Output Steam, Electrical Power



FR, Issy-les-Moulineaux

Start of operation 2007 Combustion Concept

> Fuel Municipal Solid Waste Number of Lines Throughput per line 34.90 t/h 85.23 MW Thermal power per line

Concept 4-pass boiler Boiler

104 t/h at 50 bar(a) and 400 °C Steam

Entrainment reactor, Fabric Filter, Flue gas treatment Concept

Sodium Bicarbonate, Lignite Coke Reactant

151'000 m³/h (STP) Throughput per line

Electrical Power. Hot Water Energy recovery Output



DE, Bamberg L1 - L3

Start of operation 2007 Combustion

Concept Air-cooled Grate Fuel

Municipal Solid Waste, Industrial

Waste, Sewage Sludge

Number of Lines

Throughput per line 6.00 t/h 17.50 MW Thermal power per line Concept 5-pass boiler

Boiler Steam 20 t/h at 40 bar(a) and 400 °C

Energy recovery Output Hot Water



JP, Kitashiribeshi, Hokkaido

Start of operation 2007 Combustion Air-cooled Grate Concept Fuel Municipal Solid Waste

Number of Lines 2 Throughput per line 4.10 t/h 2.00 MW Thermal power per line

Electrical Power Energy recovery Output



DE, Amtzell

Start of operation Anaerobic Digestion 2007

Number of Digester(s) 1
Net volume per digester 1300 m3
Digester Design Concrete
Digester Type GG20

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 18000 t/a



DE, Gröbern

Start of operation Anaerobic Digestion 2007

Number of Digester(s)
Net volume per digester
Digester Design
Digester Type
Waste Type
Waste Throughput per Year

1300 m3 Concrete GG20 Energy Crops

Energy Crop 17000 t/a

1300 m3

Concrete

GG20



DE, Ilbenstadt

Start of operation Anaerobic Digestion 2007

Number of Digester(s)
Net volume per digester
Digester Design
Digester Type
Waste Type

Bio Waste, Green Waste

Waste Throughput per Year 18250 t/a



CH, Oetwil am See 2

Start of operation 2007



DE, Regen

Start of operation 2007



DE, Rostock

Start of operation Anaerobic Digestion 2007

Number of Digester(s) 1300 m3 Net volume per digester Concrete Digester Design Digester Type Waste Type RM18

Organic Fraction of Municipal Solid

Waste 40000 t/a

Waste Throughput per Year



CH, Utzenstorf

Start of operation Anaerobic Digestion 2007

Number of Digester(s) Net volume per digester 720 m3 Digester Design Concrete Digester Type GG12

Bio Waste, Green Waste Waste Type

Waste Throughput per Year 12000 t/a



FR, Sète

Start of operation Flue gas treatment 2006 Concept

Number of Lines

Fuel Reactant Throughput per line Entrainment reactor, Fabric Filter

Municipal Solid Waste Sodium Bicarbonate 30'000 m³/h (STP)



JP, Ariake, Kumamoto Pref.

Start of operation Combustion

Boiler

2006 Concept

Fuel Number of Lines

Throughput per line Concept Steam

Fluidized Bed Gasification Municipal Solid Waste

1.04 t/h Water Injection



CH, Lausanne (Tridel)

Start of operation 2006

Combustion Concept

Fuel Municipal Solid Waste, Hospital

Waste

2

Number of Lines

Throughput per line 12.50 t/h 40.00 MW Thermal power per line

Boiler Concept 4-pass boiler with external

economizer

Water-cooled Grate

Steam Flue gas treatment Concept

Electrostatic Precipitator (2 Fields), Ext. Eco, Fly Ash Treatment, Heat Exchanger, Heat exchanger 2, Heat exchanger 2, Heat exchanger 3,

Heat exchanger, SCR, Scrubber

46 t/h at 52 bar(a) and 403 °C

Scrubber Reactant Caustic Soda 63'200 m³/h (STP) Throughput per line

Energy recovery Output Hot Water, Electrical Power



JP, Tamura, Fukushima

Start of operation Combustion

2006 Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

Output

1.60 t/h Steam

Energy recovery



JP, Tokyo (Shinagawa)

Start of operation

2006

Combustion

Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

Thermal power per line

12.50 t/h 15.00 MW

Energy recovery Output Hot Water, Electrical Power



JP, Jonan Haseyama II

Start of operation Combustion

2006

Concept

Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line

5.00 t/h

Thermal power per line

4.90 MW

Energy recovery

Output

Electrical Power



DE, Erfurt

Start of operation 2006 Combustion Water-cooled Grate Concept

Municipal Solid Waste, Refuse Fuel

Derived Fuel

Number of Lines Throughput per line 9.75 t/h 26.00 MW Thermal power per line

Concept Boiler 3-pass boiler

Steam 29 t/h at 40 bar(a) and 400 °C Concept Fabric Filter, Semi-dry System, Flue gas treatment

Calcium Hydroxide, Lignite Coke Reactant

54'000 m³/h (STP) Throughput per line

Condensation Turbine Energy recovery Concept Electric power output 4.90 MW (gross)

Steam, Hot Water, Electrical Power Output



CH, Aarberg

Start of operation 2006

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1300 m3 Digester Design Concrete GG20 Digester Type

Waste Type Bio Waste, Green Waste, Food

Waste

Waste Throughput per Year 16000 t/a



CH, Langenthal

Start of operation 2006

Anaerobic Digestion Number of Digester(s)

240 m3 Net volume per digester Digester Design Steel Digester Type GG4

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 5600 t/a



CH, Ottenbach

Start of operation 2006



CH, Pratteln

Start of operation 2006



DE, Reimlingen

Start of operation 2006



DE, Weissenfels 2

Start of operation 2006

Anaerobic Digestion Number of Digester(s)

Net volume per digester 960 m3 Digester Design Concrete Digester Type GG16

Waste Type Bio Waste, Crop Residues

25000 t/a Waste Throughput per Year



FR, Nantes Valorena

Start of operation 2005 Flue gas treatment Concept

Entrainment reactor, Fabric Filter, SCR

Number of Lines

Municipal Solid Waste Fuel Reactant Sodium Bicarbonate 56'500 m³/h (STP)

Throughput per line

JP, Kashiwa, Chiba

Start of operation Combustion

2005 Concept Fuel

Air-cooled Grate Municipal Solid Waste

Number of Lines Throughput per line 5.21 t/h 2.50 MW Thermal power per line

Energy recovery Output Hot Water, Electrical Power





KR, Incheon South

Start of operation

Combustion

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2
Throughput per line 10.42 t/h
Output Steam

Energy recovery Out



JP, Odate, Akita

Start of operation 2005 Combustion Concept

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Hot Water

Number of Lines 2
Throughput per line 1.88 t/h
Concept Water Injection

Steam

Energy recovery Output



TW, Yunlin

Boiler

Start of operation Combustion

2005

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2
Throughput per line 12.50 t/h
Thermal power per line 15.80 MW
Output Electrical Power

Energy recovery Output



DE, Ludwigslust

Boiler

Start of operation 2005 Combustion Conce

Concept Water-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 1
Throughput per line 6.00 t/h
Thermal power per line 16.00 MW
Concept 3-pass boiler

Steam 19 t/h at 40 bar(a) and 400 °C Flue gas treatment Concept Fabric Filter, Semi-dry System,

Reactant Calcium Hydroxide, Lignite Coke

Throughput per line 34'000 m³/h (STP)

Energy recovery Concept Condensation Turbine
Electric power output 3.00 MW (gross)
Output Electrical Power

a company of Hitachi Zosen Corporation

Water-cooled Grate

Fluidized Bed

Fluidized Bed



DE, Zorbau

Start of operation 2005

Combustion Concept Fuel

Municipal Solid Waste Number of Lines

21.00 t/h Throughput per line Thermal power per line 53.60 MW

3-pass boiler Boiler Concept

Steam 63 t/h at 40 bar(a) and 400 °C

Flue gas treatment Concept Semi-dry System, Fabric Filter,

SNCR 118'000 m³/h (STP)

Throughput per line Energy recovery Concept Condensation Turbine

28.30 MW (gross) Electric power output **Electrical Power** Output



US, Corn Plus, Winnebago, MN

Start of operation Combustion Concept

Corn Syrup Fuel Number of Lines

Throughput per line 22.70 t/h Thermal power per line 38.00 MW

Flue gas treatment Concept Entrainment reactor, Fabric Filter Steam

Energy recovery Output



US, Hampton Roads, VA

Start of operation 2005 Combustion Concept

Fuel Sewage Sludge Number of Lines 1.10 t/h Throughput per line Thermal power per line 2.60 MW

Concept Scrubber Flue gas treatment

Throughput per line 23'000 m³/h (STP)



SE, Uppsala (Block 5)

Energy recovery

Start of operation 2005 Combustion Concept Water-cooled Grate

Fuel Municipal Solid Waste Number of Lines

26.40 t/h Throughput per line Thermal power per line 73.33 MW

Boiler Concept 4-pass boiler

Steam 100 t/h at 20 bar(a) and 212 °C Electrostatic Precipitator (2 Fields), Flue gas treatment Concept Scrubber, Fabric Filter, SCR

Scrubber Reactant

148'900 m3/h (STP) Throughput per line Output Steam, Hot Water



FR, Rennes L1+L2

2005 Start of operation Flue gas treatment Concept

Number of Lines Fuel

Throughput per line

Energy recovery Output Semi-dry System, Fabric Filter,

SCR

Municipal Solid Waste 40'400 m³/h (STP)

Steam, Electrical Power



FR, Rennes L3

Start of operation Flue gas treatment

2005 Concept

Semi-dry System, Fabric Filter,

SCR

Number of Lines

Fuel

Throughput per line

Municipal Solid Waste 61'900 m³/h (STP) Steam, Electrical Power

Output Energy recovery



CH, Jona

Start of operation Anaerobic Digestion 2005

Number of Digester(s) Net volume per digester

Concrete Digester Design Digester Type ZAFE

Bio Waste, Food Waste, Green Waste Type

Waste

330 m3

Waste Throughput per Year 5000 t/a



ES, La Rioja

Start of operation **Anaerobic Digestion**

2005

Number of Digester(s) Net volume per digester

1050 m3 Digester Design Concrete ZAFB Digester Type

Waste Type Organic Fraction of Municipal Solid

Waste

Waste Throughput per Year 75000 t/a



CH, Lenzburg

Start of operation Anaerobic Digestion 2005

Number of Digester(s) Net volume per digester

Digester Design Digester Type

340 m3 Steel

ZAFS Bio Waste, Food Waste, Green Waste Type

Waste, Liquid Waste

Waste Throughput per Year 5000 t/a



MQ, Martinique

Start of operation 2005



CH, Uzwil 2

Start of operation 2005

Anaerobic Digestion Number of Digester(s)

Net volume per digester 1300 m3 Digester Design Concrete Digester Type ZAFB

Bio Waste, Green Waste Waste Type

Waste Throughput per Year 20000 t/a



DE, TREA Breisgau

Start of operation 2004 Combustion

Concept Fuel

Water-cooled Grate Municipal Solid Waste

Number of Lines 22.00 t/h Throughput per line 61.10 MW Thermal power per line

Concept

3-pass boiler with external

economizer

Steam Concept

74 t/h at 40 bar(a) and 400 °C

Electrostatic Precipitator (2 Fields), SCR, Semi-dry System, Fabric

Filter, Scrubber

Scrubber Reactant Lye

Throughput per line 116'000 m3/h (STP)



JP, Takamatsu, Kagawa Pref.

Start of operation Combustion

Flue gas treatment

Boiler

2004 Concept Fuel

Number of Lines

Fluidized Bed Gasification Municipal Solid Waste

4.17 t/h Throughput per line

Water-cooled Grate

Electrical Power

Fluidized Bed

Municipal Solid Waste



NL, Alkmaar L4

Start of operation 2004

Combustion Concept Fuel

Number of Lines 1

Throughput per line 27.50 t/h
Thermal power per line 75.00 MW

Boiler Concept 4-pass boiler with external

economizer

Steam 89 t/h at 42 bar(a) and 405 °C Flue gas treatment Concept Electrostatic Precipitator (2 Fields),

Electrostatic Precipitator (3 Fields),

SNCR, Fabric Filter, Scrubber

Scrubber Reactant Scrubber Reactant Caustic Soda
Reactant Activated Carbon
Throughput per line 155'900 m³/h (STP)

Energy recovery Output



US, MCES, St. Paul, MN

Start of operation 2004
Combustion Concept

Fuel Sewage Sludge
Number of Lines 3
Throughput per line 4.00 t/h
Thermal power per line 9.40 MW

Flue gas treatment Concept

Scrubber Reactant

Throughput per line 40'190 m³/h (STP)

Energy recovery Output Steam



TW, Taitung

Start of operation 2004 Combustion Cond

Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines

Throughput per line 6.25 t/h
Output Electrical Power

Energy recovery Output



JP, Kyoto

Start of operation 2004

Anaerobic Digestion Number of

Number of Digester(s)2Net volume per digester1150 m3Digester DesignSteelDigester TypeGG16

Waste Type Bio Waste, Food Waste

Waste Throughput per Year 15000 t/a



DE, Passau

Start of operation 2

2004

2003



CH, Thun

Start of operation
Combustion

Concept Water-cooled Grate

Fuel Municipal Solid Waste, Sewage

Sludge

Number of Lines

Throughput per line 18.40 t/h
Thermal power per line 46.00 MW

Boiler Concept 4-pass boiler with external

economizer

Steam
Flue gas treatment Concept

55 t/h at 40 bar(a) and 400 °C Electrostatic Precipitator (3 Fields), SCR, Ext. Eco, Heat Exchanger,

SCR, Ext. Eco, Heat Exchanger, Scrubber, Heat exchanger, Fabric Filter, Fly Ash Treatment

Scrubber Reactant Lye

Throughput per line 78'000 m³/h (STP)



FR, Poitiers

Start of operation Combustion

2003 Concept Fuel

Number of Lines
Throughput per line

Air-cooled Grate Municipal Solid Waste

2 3.30 t/h



FR, Evreux

Flue gas treatment

Boiler

Start of operation 2003 Combustion Conce

Concept Fuel

Air-cooled Grate
Municipal Solid Waste, Sewage

Sludge

Number of Lines 2
Throughput per line 5.63 t/h
Thermal power per line 14.40 MW

Concept Steam 2-pass boiler 17 t/h at 40 bar(a) and 380 °C

Concept

Fabric Filter, SCR, Semi-dry

System

Reactant Sodium Bicarbonate, Lignite Coke

Throughput per line 31'000 m³/h (STP)
Concept Back-pressure Turbine

Energy recovery

Electric power output 6.00 MW (gross)
Output Electrical Power

Fluidized Bed Gasification

Fluidized Bed Gasification



JP, Ishikawahokubu, Ishikawa Pref.

Start of operation 2003 Combustion

Concept Fuel

Number of Lines Throughput per line 3.33 t/h



JP, Fukue, Nagasaki Pref

Start of operation 2003 Combustion Concept

Fuel

Number of Lines Throughput per line 1.20 t/h



FR, Perpignan

Flue gas treatment

Boiler

Start of operation 2003 Combustion

Concept Air-cooled Grate Fuel Municipal Solid Waste

Number of Lines

Throughput per line 12.10 t/h 32.40 MW Thermal power per line Concept 4-pass boiler

Steam

35 t/h at 40 bar(a) and 380 °C Semi-dry System, Fabric Filter, Concept

SNCR

Throughput per line

Concept Energy recovery

61'000 m3/h (STP) Condensation Turbine Electric power output 21.00 MW (gross)

Output



US, WWTP Lynn, MA

Start of operation 2003 Combustion

Concept Fuel

Fluidized Bed Sewage Sludge Number of Lines

Throughput per line 1.07 t/h 2.10 MW Thermal power per line

Flue gas treatment Concept

Throughput per line

Scrubber, Electrostatic Precipitator

40'100 m³/h (STP)

Electrical Power



JP, Touga, Pref Shizuoka

Start of operation 2003 Combustion

Fuel Number of Lines Throughput per line Municipal Solid Waste

Water-cooled Grate

Municipal Solid Waste

1.88 t/h



IT, Bologna

Boiler

Start of operation 2003 Combustion

Concept Fuel Number of Lines

13.75 t/h Throughput per line Thermal power per line 44.80 MW Concept 4-pass boiler

Steam 53 t/h at 50 bar(a) and 0 °C



JP, Niijima, Tokyo Pref.

Start of operation 2003 Combustion Fuel

Number of Lines Throughput per line

1.00 t/h



CH, Buchs SG L1

Boiler

Energy recovery

Start of operation 2003 Combustion Concept

Fuel

Water-cooled Grate

Municipal Solid Waste, Industrial

Waste 7.20 t/h

Number of Lines

Throughput per line Thermal power per line

22.80 MW 3-pass boiler

Concept Steam

30 t/h at 40 bar(a) and 0 °C

Output

Steam, Hot Water, Electrical Power



CH, Bachenbülach 2

Start of operation 2003

Anaerobic Digestion Number of Digester(s)

Net volume per digester340 m3Digester DesignSteelDigester TypeZAFS

Waste Type Bio Waste, Green Waste, Food

Waste

Waste Throughput per Year 4000 t/a



DE, Weissenfels 1

Start of operation 2003

Anaerobic Digestion Number of Digester(s)

Net volume per digester980 m3Digester DesignConcreteDigester TypeZAFB

Waste Type Bio Waste, Green Waste

Waste Throughput per Year 12500 t/a



DE, Bremerhaven Duotherm

Start of operation 2002 Combustion Conce

n Concept Water-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 1
Throughput per line 8.00 t/h
Thermal power per line 23.30 MW
Concept 4-pass boiler

Boiler Concept 4-pass boiler

Steam 27 t/h at 40 bar(a) and 0 °C

Energy recovery Output Electrical Power



JP, Sakurai, Nara Pref.

Start of operation

Combustion Concept Fluidized Bed Gasification

Fuel

2002

Number of Lines 2 Throughput per line 3.12 t/h



FR, Le Mans L2bis

Start of operation 2002 Air-cooled Grate Combustion Concept

Municipal Solid Waste, Hospital Fuel

Waste

Number of Lines

Throughput per line 9.00 t/h 24.10 MW Thermal power per line

Boiler Concept 3-pass boiler Steam 29 t/h at 30 bar(a) and 350 °C

Concept Fabric Filter, SCR, Semi-dry Flue gas treatment

System

Throughput per line 50'000 m3/h (STP) **Electrical Power**

Energy recovery Output



JP, Okinoerabu, Kagoshima Pref.

Start of operation 2002 Combustion Fuel

> Number of Lines Throughput per line

Boiler Concept

Steam

Municipal Solid Waste

1.00 t/h Water Injection



JP, Nasu, Tochigi Pref.

Start of operation 2002 Combustion Fuel

Number of Lines

Throughput per line

Energy recovery Output

Flue gas treatment

Energy recovery

Municipal Solid Waste

2.50 t/h

Steam, Hot Water



CH, KEBAG Emmenspitz L4

Start of operation 2002 Combustion

Water-cooled Grate Concept

Fuel Municipal Solid Waste, Industrial

Waste, Sewage Sludge

Number of Lines

10.00 t/h Throughput per line 28.50 MW Thermal power per line

Boiler Concept 3-pass boiler

Steam 32 t/h at 38 bar(a) and 385 °C Scrubber, Fly Ash Treatment, Concept

SNCR, NH4OH-Stripper Scrubber Reactant

Lye

Throughput per line 58'040 m3/h (STP) Concept Back-pressure Turbine

Electric power output 7.70 MW (gross) Output Steam, Hot Water, Electrical Power



JP, Osaka (Maishima)

Start of operation 2001

Combustion Fuel

Number of Lines

Throughput per line

Flue gas treatment Concept Fabric Filter, Heat Exchanger, SCR,

Scrubber

Municipal Solid Waste

Output **Electrical Power** Energy recovery



JP, Fukuoka Rinkai

Start of operation

Combustion Fuel

Number of Lines

Throughput per line

Energy recovery Output Municipal Solid Waste

12.50 t/h

Electrical Power



JP, Nishimurayama, Yamagata Pref.

2001 Start of operation

Combustion Fuel

Boiler

Number of Lines

Throughput per line

Concept

Steam

Energy recovery Output Municipal Solid Waste

2.08 t/h

Water Injection

Hot Water



JP, Tokyo (Chuo)

Start of operation

Combustion

Fuel

Output

Number of Lines

Throughput per line

12.50 t/h 15.00 MW

Thermal power per line

Hot Water, Electrical Power

Municipal Solid Waste



FR, Rouen

Energy recovery

Start of operation

Combustion

2001 Concept

Fuel

Number of Lines

Throughput per line Thermal power per line 14.50 t/h 38.80 MW

Air-cooled Grate

Municipal Solid Waste

4-pass boiler

Concept Boiler Steam

46 t/h at 36 bar(a) and 0 °C

Energy recovery Output **Electrical Power**



DE, Nuremberg L1-L3

Start of operation 2001 Combustion Concept

Concept Water-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 3
Throughput per line 10.50 t/h
Thermal power per line 35.00 MW

Boiler Concept 4-pass boiler

Steam 41 t/h at 45 bar(a) and 400 °C

Flue gas treatment Concept SCR, Scrubber Scrubber Reactant Lye

Throughput per line 64'250 m³/h (STP)

Energy recovery Output Steam



FR, Maubeuge

Start of operation 2001

Combustion Concept Air-cooled Grate
Fuel Municipal Solid Waste

Number of Lines 2
Throughput per line 5.50 t/h
Thermal power per line 14.10 MW

Boiler Concept 4-pass boiler Steam 4-pass boiler 17 t/h at 36 bar(a) and 360 °C

Flue gas treatment Concept Semi-dry System, Fabric Filter

Throughput per line 30'500 m³/h (STP)

Energy recovery Output Steam, Hot Water, Electrical Power



FR, Salaise L3

Start of operation 2001

Combustion Concept Water-cooled Grate

Fuel Municipal Solid Waste, Industrial

Waste

Number of Lines 1
Throughput per line 19.00 t/h
Thermal power per line 48.60 MW

Boiler Concept 3-pass boiler Steam 77 t/h at 42 bar(a) and 350 °C

Steam 77
Flue gas treatment Concept

Throughput per line 140'000 m³/h (STP)

Energy recovery Output Steam, Electrical Power



IT, Trezzo

Boiler

Start of operation 2001

Combustion Concept Water-cooled Grate

Fuel Municipal Solid Waste Number of Lines 2

Throughput per line 16.16 t/h
Thermal power per line 41.20 MW
Concept 4-pass boiler

Steam 49 t/h at 40 bar(a) and 400 °C

Flue gas treatment Concept SNCR, Semi-dry System, Fabric

Filte

Throughput per line 84'000 m³/h (STP)
Energy recovery Output Electrical Power



US, McKay Bay, Tampa, FL

Start of operation 2001 Combustion Concept

Boiler

Air-cooled Grate Municipal Solid Waste Fuel Number of Lines

Throughput per line 9.46 t/h Thermal power per line 26.30 MW Concept 2-pass boiler

24 t/h at 45 bar(a) and 0 °C Steam



CH, Oetwil am See 1

Start of operation 2001



AT, Roppen

Start of operation 2001



JP, Minamikawachi-2, Osaka Pref.

Start of operation 2000 Combustion Municipal Solid Waste

Number of Lines 2 Throughput per line 3.96 t/h Concept Water Injection

Boiler

Steam

2000



JP, Hitachi, Ibaraki Pref.

Start of operation

Combustion Fuel Municipal Solid Waste

Number of Lines Throughput per line 4.17 t/h



KR, Buchon Daejang-Dong

Start of operation Combustion Fuel

Number of Lines

Throughput per line

Energy recovery Output Municipal Solid Waste

12.50 t/h

Electrical Power



JP, Amagasaki II, Hyogo Pref.

Start of operation Combustion

Fuel

Number of Lines Throughput per line Municipal Solid Waste

6.25 t/h



JP, Nishikaigan, Aomori Pref.

Start of operation 2000 Combustion Fuel

Number of Lines

Throughput per line

Boiler Concept Municipal Solid Waste

2.75 t/h Water Injection

Steam



TW, Hsichou Changhua

Start of operation 2000 Combustion

Energy recovery

Fuel

Number of Lines

Throughput per line

Output

Municipal Solid Waste

18.75 t/h

Electrical Power



TW, Houli Taichung

Start of operation Combustion

Energy recovery

Fuel

Number of Lines

Throughput per line

Output

18.75 t/h

Electrical Power

Municipal Solid Waste





US, Palo Alto, CA

Start of operation Combustion

2000 Concept Fuel

Multiple Hearth Sewage Sludge

Number of Lines Throughput per line

1.20 t/h

Flue gas treatment Concept
Throughput per line

Scrubber 18'500 m³/h (STP)

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