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| Plant | Innovatherm GmbH Fluidized bed incineration plant Lünen |
| Customer | Innovatherm GmbH Lünen, Germany |
| Start up | 1997 |
| Fuel | Coal conditioned sewage sludge from municipal waste water treatment plants, other waste materials |
| Fuel capacity | 31 t/h |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 40 bar 400 °C superheated |
| Steam generation | 41 t/h |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing system (effluent free) |
| Flue gas volume | 93'000 m ³ /h |



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| Plant | München Klärwerk Gut Grosslappen Fluidized bed incineration plants # 1 + 2 |
| Customer | City of Munich Munich, Germany |
| Start up | 1997 |
| Fuel | Sewage sludge from municipal waste water treatment plant |
| Fuel capacity | 3 t/h dry solids each |
| Incineration conditions | Acc. to German 17. BImSchV / European regu- lations |
| Steam parameters | 40 bar 400 °C superheated |
| Steam generation | 8 t/h |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing sys- tem |
| Flue gas volume | 18'000 m _n ³ /h |



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| Plant | Tongliao Meihua Fluidized bed multi waste incineration plant |
| Customer | Meihua Holding Group Co., Ltd Meihua Bio-Tech Co., Ltd. Tongliao, Inner Mongolia, China |
| Start up | 2011 |
| Waste source | Sludge from waste water treatment plant, waste coal, waste liquid |
| Waste incineration capacity | Sludge: 3'125 kg/h (25% DM) - 14'000 kg/h (32% DM) Waste coal: up to 2'700 kg/h Waste liquid: up to 8'330 kg/h |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 12 bar saturated |
| Steam generation | 20 t/h |
| Flue gas cleaning | Quench, bag filter, flue gas scrubbing system |
| Flue gas volume | 47'000 m ³ /h |



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| Plant | Karlsruhe Klärwerk Neureut Fluidized bed incineration plant # 2 |
| Customer | City of Karlsruhe Karlsruhe, Germany |
| Start up | 1991 |
| Fuel | Sewage sludge and residues from municipal waste water treatment plants |
| Fuel capacity | 2 t/h dry solids |
| Incineration conditions | Acc. to German 17. BImSchV / European regu- lations |
| Steam parameters | 40 bar 400 °C superheated |
| Steam generation | 7 t/h |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing sys- tem |
| Flue gas volume | 18'000 m _n ³ /h |



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|-------------------------|---|
| Plant | Jeonju Paper Cheongwon Mill (formerly Onyang Pulp Co.) Cheongwon, Korea Fluidized bed incineration plant |
| Customer | Samsung Engineering (general contractor) Seoul, Korea |
| Start up | 1996 |
| Fuel | Paper sludge, rejects and refuse from paper factory |
| Fuel capacity | 5.6 t/h dry solids |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 10 bar saturated |
| Steam generation | 20 t/h |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing system |
| Flue gas volume | 45'000 m _n ³ /h |



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| Plant | Stuttgart Hauptklärwerk Mühlhausen Fluidized bed incineration plant # 2 |
| Customer | City of Stuttgart Stuttgart, Germany |
| Start up | 1992 |
| Fuel | Sewage sludge and residues from municipal waste water treatment plant |
| Fuel capacity | 4 t/h dry solids |
| Incineration conditions | Acc. to German 17. BImSchV / European regu- lations |
| Steam parameters | 12 bar saturated |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing sys- tem |
| Flue gas volume | 25'000 m _n ³ /h |



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| Plant | Bottrop ZSB (Central sludge treatment plant) Fluidized bed incineration plants # 1 + 2 |
| Customer | Emschergenossenschaft Essen, Germany |
| Start up | Plant 1: 1979, plant 2: 1991 |
| Fuel | Sewage sludge and residues from municipal waste water treatment plant |
| Fuel capacity | 3 t/h dry solids each |
| Incineration conditions | Acc. to German 17. BImSchV / European regu- lations |
| Steam parameters | 35 bar 400 °C superheated |
| Steam production | 7 t/h each |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing sys- tem |
| Flue gas volume | 21'000 m ³ /h each |



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| Plant | Zweckverband ARA Visp (Lonza Visp) Fluidized bed incineration plant |
| Customer | City of Visp operated by Lonza Group AG Visp, Switzerland |
| Start up | 1976 |
| Fuel | Sewage and industrial sludge and residues from municipal waste water treatment plant |
| Fuel capacity | 5 t/h of sewage sludge (15 % DM) |
| Incineration conditions | Acc. to Swiss emission standard |
| Heat recuperation | Combustion air pre-heating 450-520 °C |
| Steam parameters | 10 bar saturated |
| Flue gas cleaning | Electrostatic precipitator, flue gas scrubbing sys- tem |
| Flue gas volume | 10'000 m _n ³ /h |



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| Plant | WWTP Jihlava Fluidized bed incineration plant |
| Customer | SMS CZ s.r.o. Rokycany, Czech Republic |
| Start up | 2008 |
| Fuel | Sewage and industrial sludge and residues from municipal waste water treatment plant |
| Fuel capacity | 1.2 t/h of sewage sludge and screenings (23-30 % DM) |
| Incineration conditions | Acc. to German 17. BImSchV / European regu- lations |
| Heat recuperation | Combustion air pre-heating 600-650 °C, hot wa- ter boiler for heating purposes |
| Flue gas cleaning | Dry flue gas scrubbing system |
| Flue gas volume | 4'500 m _n ³ /h |



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| Plant | WWTP Chifeng Fluidized bed incineration plant |
| Customer | Chifeng Derun Drainage Co., Ltd. Chifeng, Inner Mongolia, China |
| Start up | 2015 |
| Fuel | Sewage sludge |
| Fuel capacity | 90 t/h of sewage sludge (max. 2 % DM) |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 12 barg saturated |
| Steam production | 6 t/h |
| Flue gas cleaning | Bag filter, flue gas scrubbing system |
| Flue gas volume | 18'000 m ³ /h |



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| Plant | WWTP Bonn Salierweg Fluidized bed incineration plant (two lines) |
| Customer | City of Bonn, Germany |
| Start up | 1981 |
| Fuel | Sewage sludge |
| Fuel capacity | 4.7 t/h of sewage sludge (30 % DM) |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 7 barg saturated |
| Steam production | 2.8 t/h |
| Heat recovery, flue gas cleaning | Recuperator for combustion air pre-heating (620 °C), waste heat steam boiler, flue gas dedusting, flue gas cleaning system |
| Flue gas volume | 11'500 m ³ /h |



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| Plant | Xinjiang Wujiaqu Plant Fluidized bed incineration plant with 2 nd combustion chamber |
| Customer | Meihua Holding Group Co., Ltd, China |
| Start up | 2014 |
| Waste source | Sludge and waste liquid from production plant |
| Waste incineration capacity | Sludge: 4'400 kg/h (15~20% DM) Coal: up to 2'500 kg/h Waste liquid: up to 15'000 kg/h (fed into 2 nd combustion chamber) |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Steam parameters | 52 bar 485 °C superheated |
| Steam generation | 40 t/h |
| Flue gas cleaning | Hot gas cyclone for first stage dust removal between FBI and 2 nd combustion chamber, quench, bag filter, flue gas scrubbing system |
| Flue gas volume | 100'000 m _n ³ /h |



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| Plant | Formosa Plastics Corporation Fluidized bed incineration plant (open nozzle bottom) |
| Customer | Formosa Plastics Corporation (FPC) Kaohsiung, Taiwan |
| Start up | 2015 |
| Waste source | Industrial sludge incl. fibres (20-30% DS) and waste oil from production plant |
| Waste incineration capacity | Industrial sludge: 2 t/h Waste oil: 200 kg/h |
| Incineration conditions | Acc. to German 17. BImSchV / European regulations |
| Heat recovery system | Combustion air pre-heating to 500 °C |
| Flue gas cleaning | quench, bag filter, flue gas scrubbing system |
| Flue gas volume | 8'000 m _n ³ /h |