

# Municipal and Industrial Waste Incineration Plant



In 2005, Senja Avfallselskap contracted their new waste to energy plant with Envikraft. Senja Avfallselskap is an intermunicipal company owned by a number of municipalities in northern Norway.

The company treats up to 16,000 tonnes of waste annually, and it is the first waste treatment company in the region to build a new modern waste incineration plant in accordance with the European directive on waste incineration, Directive 2000/76/EC. The plant is the only licensed MSW plant in Norway approved to co-treat medical-, animal and other hazardous waste types.

The plant has a design capacity 2 t/h at a calorific value of 11.5 MJ/kg, and produces both electricity and district heating.



**ENVIKRAFT**



Envikraft in Denmark supplies a turn-key system for the treatment of domestic and industrial waste at Senja Avfallselskap. In addition, the plant is capable of treating medical and animal carcass waste – a feature available only with our special designed refractory lined bed.

### The scope

Fully automatic waste crane, waste hopper, incinerator, ash and slag transportation with separator for metals, steam boiler system with ECO part, fluegas treatment system, adsorption system with silos and dosing system, SNCR technology for the reduction of NO<sub>x</sub>, steam engine and power generator and district heating supply system.

The complete plant is controlled and monitored via a SCADA system designed by Envikraft.

### Special features

- Low fly ash carryover (app. 300 mg/Nm<sup>3</sup> at incinerator outlet)
- Efficient burnout of particles
- Efficient burnout of bottom ashes
- Separate boiler system minimizes risk of corrosion

### Main plant data

Nominal capacity	2 t/h
Waste calorific value	11.5 MJ/kg <sub>AV</sub>
Steam quality	Saturated steam
Pressure	13 bar <sub>g</sub> /195 °C
Steam production	7 t/h
Power production	318 kW <sub>el</sub>
District heating production	4.5 MW

### Emissions to air

Dust	4	mg/Nm <sup>3</sup>
TOC	8	mg/Nm <sup>3</sup>
HCL	10	mg/Nm <sup>3</sup>
HF	0.5	mg/Nm <sup>3</sup>
SO <sub>2</sub>	50	mg/Nm <sup>3</sup>
NO <sub>x</sub>	200	mg/Nm <sup>3</sup>
CO	50	mg/Nm <sup>3</sup>
Hg	0.04	mg/Nm <sup>3</sup>
Dioxins	0.1	ng/Nm <sup>3</sup>

*Standardized at 273 °K, 101.3 kPa, 11 % oxygen, dry gas.*

### Emissions to water

None

Envikraft  
3 Boserupvej  
Stavnsholt  
DK-3520 Farum  
Denmark  
[www.envikraft.net](http://www.envikraft.net)  
e-mail: [info@envikraft.net](mailto:info@envikraft.net)



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