

Forus Energigjenvinning 2 AS / Stavanger, Norway

VØLUND™ WASTE-TO-ENERGY TECHNOLOGY

PROJECT CASE HISTORY



The Forus 2 waste-to-energy plant in Stavanger, Norway has a total nominal capacity of 110,000 tonnes of waste per year.

The first sod for Forus 2 was cut in 2010, and the plant was put into operation in October 2012. Forus 2 is built with state-of-the-art technology and has a capacity of 8 tonnes of waste per hour. With an expected yearly operation time of more than 8,000 hours, the total combustion capacity is around 65,000 tonnes a year.

The recovered energy is utilised for the district heating network. Thereby, district heating is secured for the inhabitants of Sandnes, Sola and Stavanger.

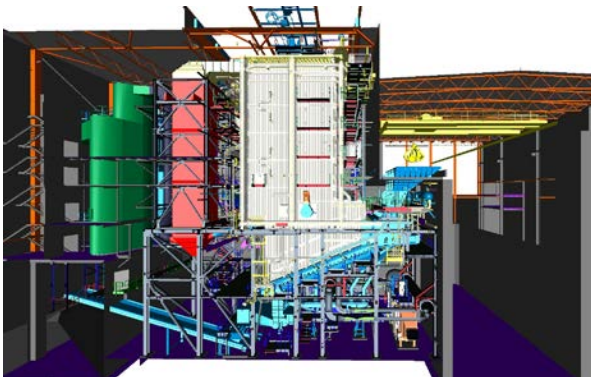
Our scope of supply

Babcock & Wilcox Renewable (B&W) was selected for the turnkey engineer-procure-construct (EPC) contract not including civil parts.

Our supply included engineering, manufacturing, delivery, construction and commissioning of the complete plant including Vølund™ technology combustion equipment with waste crane, complete steam boiler, flue gas cleaning and energy recovery of the whole process plant. Furthermore, our supply includes the necessary mechanical and electrical equipment enabling the plant to treat approximately 8 tonnes of waste an hour at a calorific value of 11 MJ/kg.



continued ►



Winning technology

Forus 2 is equipped with B&W's Vølund technology. Our unique DynaGrate® combustion grate provides Forus Energi-gjenvinning with high efficiency combustion and energy utilization. DynaGrate has been continuously updated and is among the most reliable and optimal grates in today's market.

The DynaGrate is ideal for burning both domestic and industrial waste without any preliminary processing. Typically, shredding of waste can easily cost about 15 € per ton which is not needed with our solution. Our cost-saving solution is one of the reasons we were awarded the contract.

Data plant sheet		
Process parameters	Values	Units
R1 value	1.19	
Waste capacity	8	t/h
Heat value, lower	11	MJ/kg
Steam output	29.4	t/h
Steam temperature	400	°C
Steam pressure	39	bar
Boiler outlet flue gas temp.	155	°C
Feed water temperature	125	°C
TOC, bottom ash	<5	%

Flue gas values: Before cleaning*	Values**	Units
NO _x ***	200	mg/Nm ³
CO****	<20	Ng/Nm ³
NH ₃ ***	10	mg/Nm ³

* The plant limit values comply with the EU Directive on Waste Incineration. The plant is also equipped with

a modern flue gas cleaning system.

** All values refer to 11% O₂ dry gas

*** 24-hour average

**** Half-hour average

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