

Media Release, 9 November 2022

## Hitachi Zosen Inova Appointed to Supply Boiler Technology to the Vantaa Energy's High-Temperature Incineration Plant

Installing new state-of-the-art technology to support Finland in sustainably treating its non-recyclable hazardous waste materials in the future, while contributing to safe and secure energy

*Hitachi Zosen Inova has been selected to supply and install its rotary kiln boiler technology to the Vantaa Energy's high-temperature incineration plant treating hazardous waste.*

**Vantaa, Finland:** Vantaa Energy has appointed Hitachi Zosen Inova Steinmüller (HZI STM), a subsidiary of the Swiss Japanese green-tech company Hitachi Zosen Inova, to supply and install its rotary kiln boiler technology for a new high-temperature incineration plant treating hazardous waste.

The existing Vantaa Energy from Waste (EfW) facility was originally built by Steinmüller, and this relationship continues today with HZI STM also providing other services and products to the Vantaa Energy plant in Vantaa, a city in the north of Finland's capital city Helsinki. By awarding the green-tech company, this EfW project will build on HZI STM's experience in providing robust boiler technologies that will safely, securely and reliably treat a mixture of non-recyclable hazardous waste materials and further reduce Finland's use of landfill sites.

The design works have already started and HZI STM will begin to install the rotary kiln boiler in November 2023 at the site in Vantaa, a town just north of Finland's capital Helsinki. After the three-year engineering and construction phase Vantaa Energy will start commercial operations at the new EfW facility in summer 2025.

The Vantaa Energy facility will not only treat around 40,000 tonnes of non-recyclable hazardous waste per year, importantly, the waste-derived fuel will also generate sustainable steam energy which will be used by homes and industry via a local heating network. Once operational, the facility will provide between 12 MW and 24 MW of heat energy. This will meet the heat energy needs of around 2,400 homes with stable and secure energy production.

"We are delighted to be supplying and installing our state-of-the-art rotary kiln boiler technology into Vantaa Energy's facility, which will be an important element in our client's and Finland's decarbonisation strategies," said Thomas Feilenreiter, Hitachi Zosen Inova's Vice President of Systems & Service Solutions. "HZI and HZI Steinmüller are proud to have worked on the existing Vantaa EfW facility and now as a Hitachi Zosen Inova, we look forward to again working with Vantaa Energy on this next project."

"The high-temperature incineration plant treating non-recyclable hazardous waste continues Vantaa Energy's investment programme to phase out the use of fossil fuels in the company's energy production as soon as possible and to continue towards carbon-negative energy production in 2030. Energy utilisation of waste and carbon capture and processing into new products play a key role in our strategy. For Vantaa Energy the high safety level of the technology and design solutions used, implementation of the investment projects according to stringent targets and the high degree of availability of the plants are extremely important. Cooperation with HZI STM has been excellent in the soon-to-be completed project on the Waste-To-Energy Plant. We are extremely happy that HZI STM will continue as our important partner also in the high temperature incineration plant project," says Vantaa Energy's CEO Jukka Toivonen.

## **Proprietary state-of-the-art technologies**

The new infrastructure project gained the required building permit in summer 2022 and this was followed by the signing of a contract for engineering, procurement and construction on October 24 this year. Hitachi Zosen Inova Steinmüller has a long history of installing its rotary kiln boiler technology and has previously instated these types of EfW facilities around the world – including the El Dorado facility in Arkansas, USA.

### **Technical key elements:**

A key advantage of rotary kiln technology is that several hazardous waste streams can be processed simultaneously, for example:

- Solid waste
- Waste oil
- Polluted sludges
- Polluted liquids

These non-recyclable waste materials can be treated in a single treatment unit. A total of about 40,000 tonnes of non-recyclable hazardous waste can be safely thermally converted in the Vantaa plant each year.

A secondary combustion chamber is installed directly after the rotary kiln to ensure that toxic substances in the flue gas are safely destroyed at a temperature of at least 1,100°C. This temperature is considerably higher than in conventional domestic waste EfW facilities. The secondary combustion chamber is located at the end of the rotary kiln.

The flue gas from the secondary combustion chamber is fed into a steam boiler which cleans process steam is generated at approx. 212°C, which will be used for heating purposes or optional industrial processes. The plant's modern flue gas cleaning system downstream of the boiler ensures that the latest and demanding European emission limits are always safely met.

### **Factsheet:**

#### **About Hitachi Zosen Inova**

Zurich-based green-tech company Hitachi Zosen Inova (HZI) is a global leader in solutions for energy transition and circular economy including Energy from Waste (EfW) and Renewable Gas (RG), operating as part of the Hitachi Zosen Corporation Group. HZI acts as project developer, technology supplier and engineering, procurement and construction (EPC) contractor delivering complete turnkey plants and system solutions for thermal and biological waste recovery. Its solutions are based on efficient and environmentally sound technologies, are thoroughly tested, and can be flexibly adapted to customer requirements. HZI's Service Solutions Group combines its own research and development with comprehensive manufacturing and erection capabilities to provide support throughout a plant's entire plant cycle. HZI works for customers ranging from established waste management companies to up-and-coming partners in new markets. Its innovative and reliable solutions have been part of more than 1,600 reference projects worldwide. To find out more about HZI, please visit [www.hz-inova.com](http://www.hz-inova.com).

#### **Media Contact:**

Hitachi Zosen Inova AG  
Corporate Communication  
Hardturmstrasse 127, CH-8005 Zurich, T +41 44 277 14 57  
E: [com@hz-inova.com](mailto:com@hz-inova.com)  
[www.hz-inova.com](http://www.hz-inova.com)