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Next Generation of Waste Fired Power Plants

Getting the most out of your trash!

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Abstract

It is generally believed that incineration systems based on combustion grates are old fashioned and it is widely understood that there are no new developments in that area. This image is incorrect; it is proven technology – but it is still improving!

The waste-to-energy sector has undergone a rapid technological development over the latest 10 years. Lately, new technologies have been introduced, such as Advanced Combustion Control (ACC), the use of Inconel® protection in boilers, boiler cleaning, water cooled combustion grates and wear zones.

Moreover, the presentation will show how modern engineering tools such as CFD (Computational Fluid Dynamics software) are used for designing the best furnace and boiler configurations.

These new developments are illustrated through a case study of a new class of waste fired power plant burning 20 tonnes of waste per hour. This paper will present some of the test results from operating the plant, including the development of a new advanced control system.