JFE エンジニアリング 株式会社

New pressure wave cleaning technology adopted for waste incinerator boiler cleaning system – achieving higher stability and superior cost-effectiveness compared to conventional methods.

January 20, 2026
JFE Engineering Corporation

JFE Engineering Corporation (President: Kazumi Fukuda, Headquarters: Chiyoda-ku, Tokyo) acquired the manufacturing and sales license in Japan for the PWG [*1] combustion-type pressure wave boiler cleaning system owned by P-wave GmbH (President: Heinz Zuercher, Headquarters: Muri) , headquartered in Switzerland, in November 2025. Going forward, JFE Engineering will sell the PWG in Japan, primarily to waste incineration facilities operated by the JFE Group, as a key piece of equipment for the "high-efficiency boiler cleaning system combining water injection and pressure waves" that the company has established.

In recent years, waste incineration facilities have also taken on the function of power plants, making the performance of boilers that recover combustion heat and produce steam crucial. In waste incinerators, the accumulation of soot (dust) on the boiler's heat transfer surface is a major cause of decreased thermal efficiency, and its removal is essential from the standpoint of ensuring stable operation and economic viability
of the facility. While steam-powered soot blowers were traditionally the mainstream boiler cleaning device, pressure wave cleaning devices, which do not use steam for power generation, thus maintaining power generation efficiency, and do not cause wear on the boiler, thus extending the lifespan of the equipment, are now being widely adopted as an alternative.

For many years, our company has focused on developing boiler cleaning technology with the aim of achieving high-efficiency power generation at waste incineration facilities. In 2025, our established "high-efficiency boiler cleaning system combining water injection and pressure waves" received the Minister of Economy, Trade and Industry Award at the 50th Excellent Environmental Equipment Awards [*2] .
Part of that award-winning technology, the pressure wave cleaning system currently widely used in Japan, uses methane gas and oxygen as fuel. However, the PWG pressure wave cleaning system adopted this time uses inexpensive propane gas and compressed air, significantly reducing operating costs. Furthermore, because it does not involve explosions in the pressure wave formation process, it has a simple structure and can handle a wide range of output adjustments with a single model, reducing equipment costs and making it applicable to various boilers. Our company

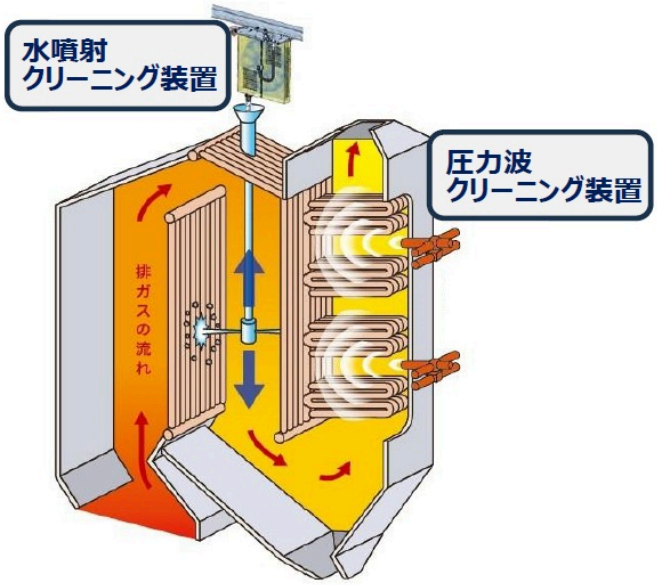
JFE エンジニアリング 株式会社

We will continue to enhance the performance of our waste incineration facilities with cutting-edge technology, contributing to the realization of a circular economy through decarbonization and reduction of environmental impact.

*1 P-wave's pressure wave cleaning device product name: Power Wave Generators

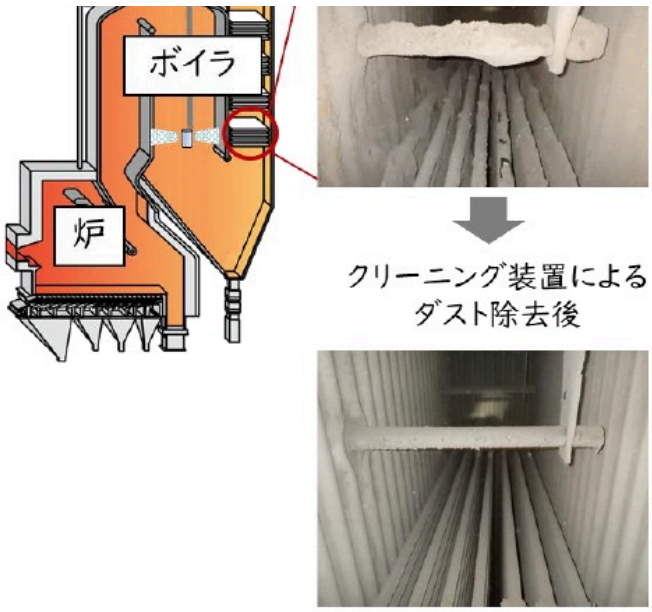
*2 The "High-Efficiency Boiler Cleaning System Combining Water Injection and Pressure Waves" received the Minister of Economy, Trade and Industry Award at the 50th Excellent Environmental Equipment Awards hosted by the Japan Federation of Industrial Manufacturers.
https://www.jfe-eng.co.jp/news/2025/20250324.html

Image of a high-efficiency boiler cleaning device.

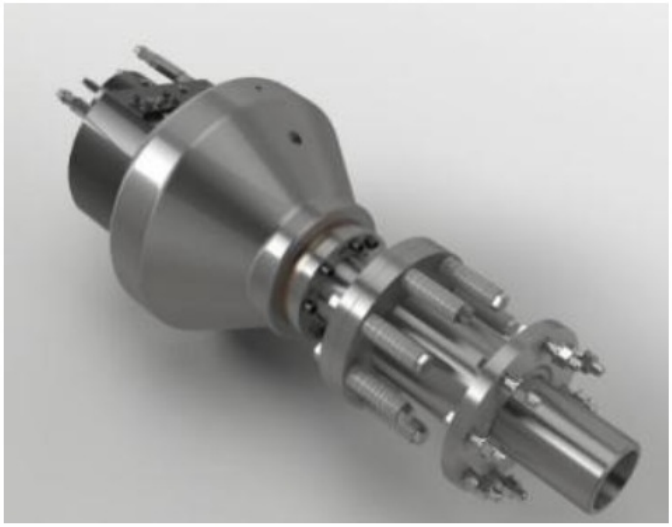


Boiler interior dust buildup and condition after removal.

JFE エンジニアリング 株式会社



Appearance of the main unit of the pressure wave cleaning device (PWG)



End

くらしの礎を 創る・担う・つなぐ — Just For the Earth

For inquiries regarding this matter, please contact us at the address below.

JFE Engineering Corporation, General Affairs Department, Public Relations Office

JFE エンジニアリング 株式会社