

October 21, 2020

Press release

Idemitsu Kosan Co., Ltd.
NYK Idemitsu Green Solutions Co., Ltd.

Boiler Control Optimization System ULTY-V Plus That Reduces CO₂ Emissions Is Selected by First Overseas Customer, Formosa Plastics Corporation

NYK Idemitsu Green Solutions Co., Ltd.* (Head office: Minato-ku, Tokyo; President & Representative Director: Keiji Tsuchiya) – a joint venture between Idemitsu Kosan Co., Ltd. (Head office: Chiyoda-ku, Tokyo; Representative Director & CEO: Shunichi Kito) and the Nippon Yusen Group – has signed a contract with Formosa Plastics Corporation (Head office: Taipei City, Taiwan), under which NYK Idemitsu Green Solutions will deliver six units of ULTY-V plus, which is a system for optimizing boiler control. While some 100 units of ULTY-V plus have already been sold in Japan, this signing marks the first overseas sale of the system.

ULTY-V plus is a fully self-contained boiler control system that utilizes artificial intelligence (AI) to independently measure, analyze, and determine a whole range of boiler operations including fuel feed adjustment, and steam pressure adjustment. This system can be installed on any boiler used at power plants and factories to optimize its operations. By choosing to use ULTY-V plus under the contract, Formosa Plastics Corporation is poised to reap benefits in the form of approximately a 1.0% reduction in fuel usage (90,000 tons/year for all six units) and 234,000 tons/year reduction in CO₂ emissions for all six units, which are significant improvements in fuel economy and environmental impact reduction.

As Formosa Plastics Corporation has been a business partner of Idemitsu Kosan for years in the area of functional chemicals, it has been testing ULTY-V plus on the coal-fired power-generation boilers in operation at its Mailiao plant, as a result of which the system proved to be able to improve combustion efficiency and reduce fuel usage.

Key contractual terms

1. Company name: Formosa Plastics Corporation (Head office: Taipei City)
2. Power plant: Mailiao plant where six coal-fired boilers are operated (600 MW/boiler)
3. Installation completion schedule: By the end of FY 2020

NYK Idemitsu Green Solutions Co., Ltd. is committed to developing innovative environmental technologies such as ULTY-V plus and providing related consulting services, etc. in order to reduce CO₂ emissions on a global scale.

* NYK Idemitsu Green Solutions Co., Ltd. is a joint venture company that was established in March 2019 to mainly promote the sales of ULTY-V plus in Japan and overseas including China, Taiwan, and Vietnam.

Shareholders: Idemitsu Kosan Co., Ltd., NYK Trading Corporation, and Nippon Yusen K.K.

Business description: Sales, development, and improvement of boiler control optimization systems and provision of related consulting services, etc.

URL: <https://nyk-idemitsu-gs.co.jp/>

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Reference information:

1. Overview of ULTY-V plus

- Product name: Boiler control optimization system ULTY-V plus
- Compatible facilities: Coal-fired boilers (pulverized coal combustion and fluidized-bed combustion types) and other types of boilers
- Compatible fuel types: Coal-only firing, coal-biomass mixed firing, coal-byproduct fuel mixed firing, heavy oil-byproduct fuel mixed firing
- Fuel reduction rate (CO₂ reduction rate): 0.5 to 1.5%
- Features: (1) The system has a self-learning function that is powered by built-in artificial intelligence to optimize fuel control.
(2) The system stabilizes plant controllability and significantly improves energy efficiency.



Exterior view

2. Overview of Formosa Plastics Corporation

Formosa Plastics Corporation is a core company within the Formosa Plastics Group (FPG), which is a major Taiwanese conglomerate founded by the brothers Yung-ching and Yung-tsai Wang in 1954.

FPG holds TWD 4 trillion in total assets and has over 110,000 employees working globally. Its business portfolio is highly diversified and includes petrochemicals, steel, electronics, machinery, fiber, medicine, and biotechnology.