



NIPPON STEEL
ENGINEERING

Nippon Steel Engineering and Waste to Energy Business



Yuriko Endo

Marketing and Sales Section

Overseas Business Development Department

Email: endoh.yuriko.mb7@eng.nipponsteel.com

Tel: +81 (80) 8956 3980

1. Nippon Steel Group Corporate Profile



NIPPON STEEL

Company Nippon Steel Corporation

Year Established 1970
(orig. 1950 as state-owned steel works)

Main Office Tokyo, Japan

Revenue JP¥4,829 bil (appx. US\$42 bil)

Employees 106,226

Business

- 1) Steelmaking and Steel Fabrication
- 2) Engineering and Construction
- 3) Chemicals and Materials
- 4) System Solutions

Steelmaking and Steel Fabrication

3rd Biggest Crude Steel Production Company in the World and the Biggest Crude Steel Production Company in Japan

Chemicals and Materials

System Solutions

Engineering and Construction

Company Nippon Steel Engineering Co., Ltd.

Year Established 2006 (spun-off from Nippon Steel Corporation as its 100% subsidiary)

Main Office Tokyo, Japan (Main office); 20 overseas bases including PNS Construction Inc. (Manila)

Revenue JP¥324 bil (appx. US\$2.9 bil)

Employees 6,057

Business



**NIPPON STEEL
ENGINEERING**

Steel Plants

- Ironmaking
- Steelmaking
- Casting
- Rolling
- Processing



Environmental & Energy Solutions

- **Waste to Energy Plants**
- Biomass Power Generation
- Geothermal Steam Production
- Soil Remediation



Building & Infrastructure

- Building Construction
- High-tech Steel Structures
- Response Control & Seismic Isolation Devices



Marine Eng. & Construction

- Oil & Gas Exploration Facilities
- Marine Engineering and Construction



Pipelines

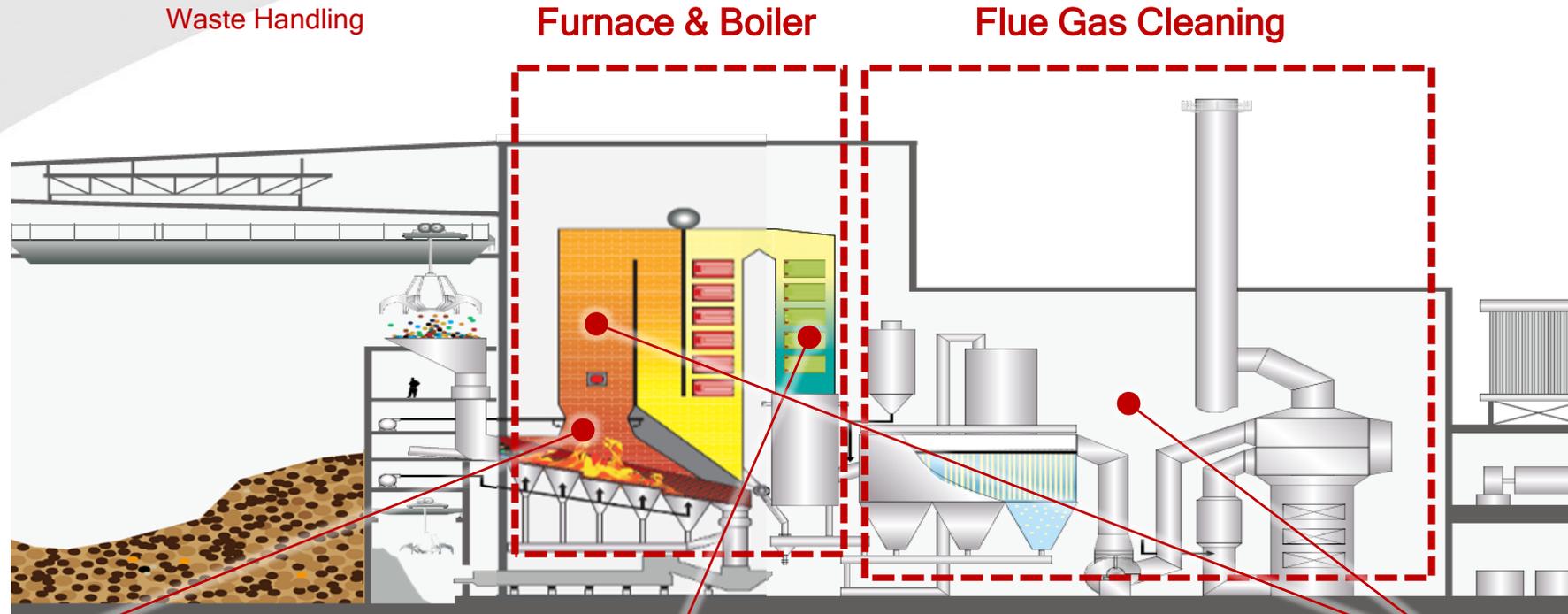
- On-shore Pipelines
- Water Works
- Energy Plants



All figures are consolidated as of 31 March 2021

2. Features of Nippon Steel Engineering's WTE technology

State-of-the-Art Waste to Energy Technology



A

Flexible Furnace Design
1,300 to 5,000 kcal/kg

B

High Efficiency of Electricity Generation
Highest up to 30%

C

Maximum Removal of Toxins in Flue Gas
Compliance with EU, US, JP emissions regulations

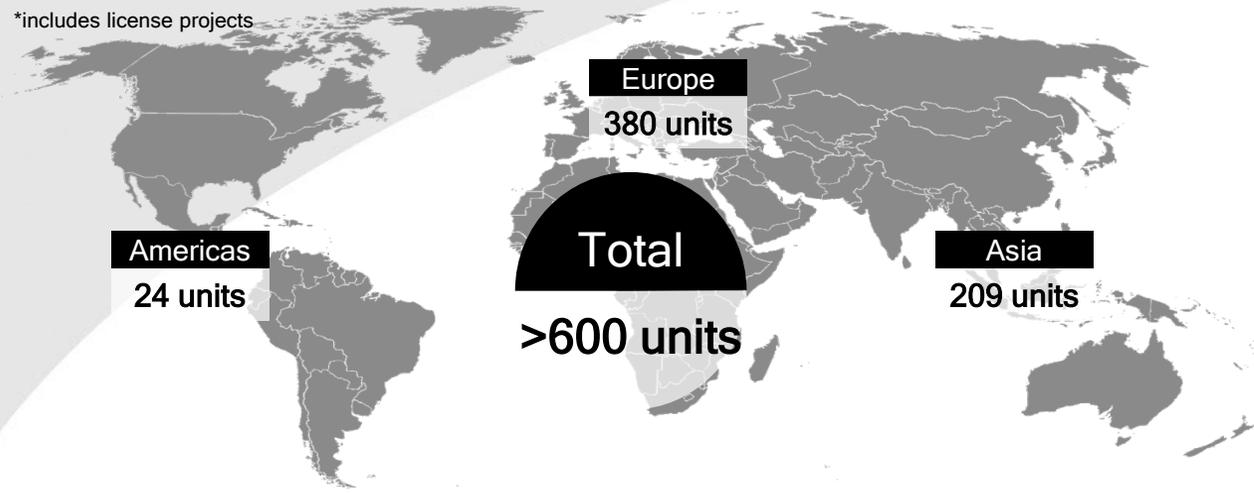
D

Maximization of Operation Time
Guarantee 8,000 hours/year

3. Nippon Steel Engineering's WTE References

More than 600 references worldwide using NSE's WTE technology - over 30 countries in 60 years

*includes license projects



Feasibility Study Projects for WTE in South East Asia

Country	Year	Project Site	Project Sponsor
Viet Nam	2015, 2017	Hai Phong City	Ministry of Environment, Japan
Philippines	2014	Laguna Techno Park	Ministry of Environment, Japan
	2015	Davao City	JICA
	2017	Davao City	Ministry of Environment, Japan
Malaysia	2015, 2020, 2022	Iskandar Malaysia	Ministry of Environment, Japan
Thailand	2015	Samut Prakan Province	Ministry of Environment, Japan
	2015	Rayong Province	Ministry of Environment, Japan
	2017	Chiangmai Municipality	Ministry of Environment, Japan



Taoyuan, Taiwan

Start-up	2022 (planned)
Waste	Municipal Solid Waste, Commercial Waste
Capacity	660 tons/day (330 tons/day x 2 lines)
Calorific Value	3,000 kcal/kg
NSE's Scope	Engineering and Supply of Core Systems, and SV



Hiagari, Fukuoka, Japan

Start-up	2025 (planned)
Waste	Municipal Solid Waste
Capacity	508 tons/day (254 tons/day x 2 lines)
NSE's Scope	BTO (Build-Transfer-Operate)



Berlin, Germany

Start-up	2012
Waste	Municipal Solid Waste
Capacity	960 tons/day x 1 line
Calorific Value	1,936 kcal/kg