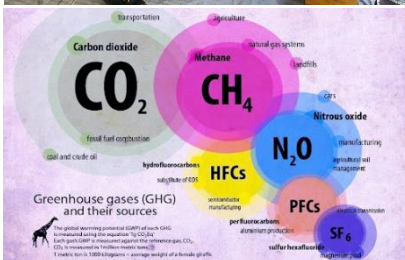


CAPABILITY PROFILE



■ **Environmental monitoring and analysis**

■ **Greenhouse gas inventory, energy saving diagnostics**

■ **Exhaust gas treatment system performance test**

■ **Material structure and composition analysis**

■ **Non-destructive testing (NDT)**

■ **Equipment trading**

COMPANY INTRODUCTION



Head Office: No. 12, Lot K, Hoang Quoc Viet Street, Phu My Ward, District 7, Ho Chi Minh City

Hanoi Office: 9th Floor, Gelex Tower, No. 52 Le Dai Hanh, Le Dai Hanh Ward, Hai Ba Trung District, Hanoi City

Charter capital: 39,790,700,000 VND

Tax code: 0312737198

Telephone: +84-28-3620-9222

Fax: +84-28-3620-9285

Email: info@chugai-tec-vn.com

Website: www.chugai-tec-vn.com



History of formation

Chugai Technos Vietnam Co., Ltd. was established in April 2014, as the first foreign branch of Chugai Technos Corporation Japan - one of the leading corporations in Japan with more than 70 years of experience in the field of environment and non-destructive testing.



Mission

Chugai Technos always tries and strives to become one of the leading company in Vietnam providing technical services related to exhaust gas treatment systems in industries and energy, as well as meet the development requirements of organizations and businesses; thereby making a small contribution to environmental protection and the process of socio-economic construction and development.

Chugai Technos always committed to providing high quality, reliable, quickly and professional technical services with the goal: **“Customer's trust and satisfaction”**.



Capacity

Chugai Technos was granted a certificate of registration for testing activities in the field of environmental monitoring by the Ministry of Natural Resources and Environment (registration number **086/TN-QTMT**) and eligibility for environmental monitoring services (code **VIMCERTS 086**).

Currently, Chugai Technos has a team of highly qualified, experienced technical staff who are intensively trained in Japan, with bachelor's, engineer's and master's degrees.

In addition, the company dispatches engineers to the headquarters for training to improve skills every year. Chugai Technos implements a strict quality control process along with a system of high-quality machinery and equipment, Japan origin, which is inspected and calibrated annually.

OPEN LETTER

Dear Partners and Businesses,

Chugai Technos Vietnam Co., Ltd would like to send greetings, best wishes for health and prosperity to Partners and Businesses.

Chugai Technos Vietnam Co., Ltd. was established in April 2014, as the first foreign branch of Chugai Technos Corporation Japan - one of the leading corporations in Japan with more than 70 years of experience in the field of environment and non-destructive testing.

Chugai Technos was granted a certificate of eligibility for environmental monitoring services with code **VIMCERTS 086** (*3rd time*) by the Ministry of Natural Resources and Environment under Decision No. 1067/QD-BTNMT dated May 20, 2022. Chugai Technos's field of activities includes:

- Environmental monitoring and analysis;
- Exhaust gas treatment system performance test;
- Pipeline scale and blockage inspection;
- Non-destructive testing (NDT);
- Greenhouse gas inventory, energy saving diagnostics and optimization;
- Material structure and composition analysis;
- Equipment trading.

Strengths of Chugai Technos:

- ✓ A technical team of highly qualified, **experienced and highly trained in Japan.**
- ✓ High quality equipment system from countries in the G7 group, **quality is certified globally.**
- ✓ Provide **detailed, reliable, quickly results** and propose **improvement suggestions** to customers.
- ✓ Always improve the quality management system, ensuring **absolute confidentiality** for customers.

With the quality policy **“Provide high-quality technical services to gain customer's trust and satisfaction”**, Chugai Technos wishes to accompany the continuous development of customers to contribute to improving our living environment.

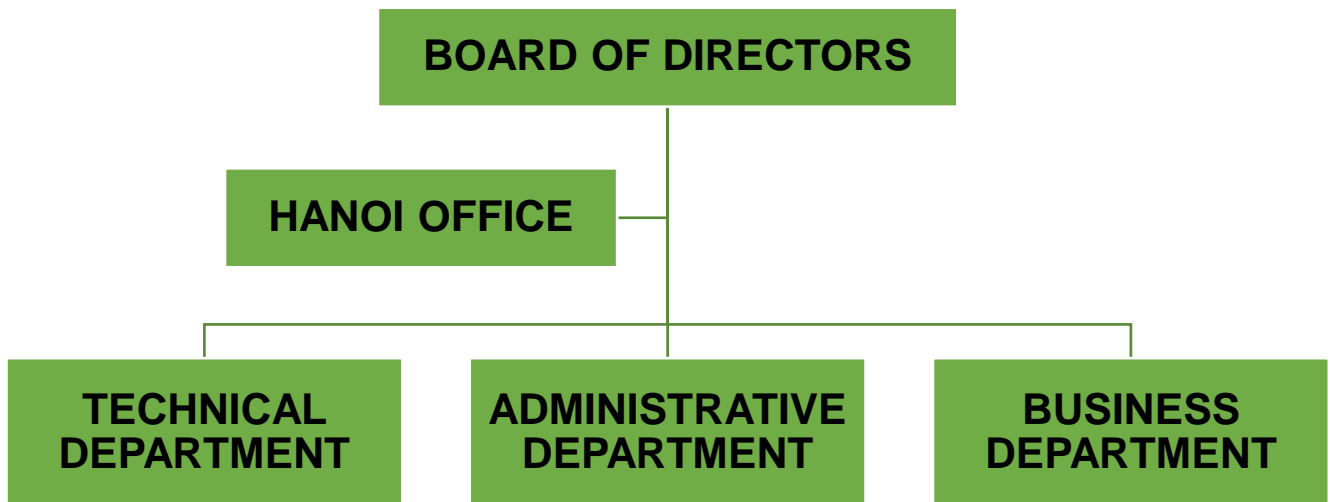
We wish you good health and success.

Kind regards,

Vice General Director

Kim Van Dung

ORGANIZATIONAL STRUCTURE



FIELD OF ACTIVITIES



Environmental monitoring and analysis

Periodically monitoring the environment and working environment. Measuring, sampling and analyzing samples of water, gas, soil, etc.



Exhaust gas treatment system performance test

Performance test for exhaust gas treatment systems at industrial plants with a team of experienced engineers and Japanese experts.



Non-destructive testing (NDT)

Advanced NDT service inspecting pipeline scale and blockage. Other NDT services: UT, MT, PT, RT, etc.



Greenhouse gas inventory

Synthesize annual energy consumption, calculate GHG emissions, propose mitigation measures, develop a mitigation plan.



Material structure and composition analysis

Analyzing scale, plaque, coatings using modern physicochemical methods (XRD, SEM, EDX, XRF, etc.), accommodates most elements, isotopes and their forms of existence.



Equipment trading

Trading in a variety of equipment in the field of environment, NDT equipment, industrial equipment, water filtration equipment using Japanese rice husks, bringing many values for health and beauty.

1. Environmental monitoring and analysis


Chugai Technos owns the **VIMCERTS 086** certificate issued by the Ministry of Natural Resources and Environment under Decision No. 1067/QĐ-BTNMT dated May 20, 2022, specializing in providing services on monitoring, analyzing traces of hazardous substances and environmental pollutants based on applicable laws and regulations.

Chugai Technos always focuses on updating, upgrading and perfecting the standard system and equipment with the goal of providing fast, accurate and reliable environmental monitoring and analysis services. In addition, we also cooperates with qualified subcontractor, certified for special criteria on pesticides, special inorganic and organic criteria of exhaust gas, water, soil samples, sludge, etc. and monitoring the working environment to fully meet the requirements of all types of businesses.

Environmental monitoring and analysis services of Chugai Technos Vietnam Co., Ltd. as follows:

- Measuring microclimate, ambient air and working environment;
- Monitoring and analyzing samples of boiler exhaust gas, furnace exhaust gas, industrial factory exhaust gas, chimney exhaust gas, etc.;
- Analyzing samples of surface water, wastewater, groundwater, sea water, etc.;
- Analyzing sludge samples, soil samples, sediments, etc.

BỘ TÀI NGUYÊN VÀ MÔI TRƯỜNG	
CHỨNG NHẬN	
ĐỦ ĐIỀU KIỆN HOẠT ĐỘNG	
DỊCH VỤ QUAN TRẮC MÔI TRƯỜNG	
Số hiệu: VIMCERTS 086 (Cấp lần: 03)	
Tên tổ chức: Công ty TNHH Chugai Technos Việt Nam.	
Trụ sở chính: Số 12, Lô K, Đường Hoàng Quốc Việt, Phường Phú Mỹ, Quận 7, Thành phố Hồ Chí Minh.	
Quyết định số: 1067 /QĐ-BTNMT ngày 20 tháng 5 năm 2022 của Bộ trưởng Bộ Tài nguyên và Môi trường về việc chứng nhận đăng ký hoạt động thử nghiệm và đủ điều kiện hoạt động dịch vụ quan trắc môi trường.	
Người đứng đầu tổ chức: Họ và tên: Ông Kazuyoshi Morimoto Chức vụ: Tổng Giám đốc Hộ chiếu số TZ1317195 do Tổng Lãnh sự quán Nhật Bản tại TP.HCM cấp ngày 25 tháng 10 năm 2018	
Thời hạn của Giấy chứng nhận: Từ ngày 20 tháng 5 năm 2022 Đến ngày 19 tháng 5 năm 2025	

LĨNH VỰC VÀ PHẠM VI ĐƯỢC CẤP GIẤY CHỨNG NHẬN	
I. QUAN TRẮC HIỆN TRƯỜNG	
Khí thải:	Đo tại hiện trường: 12 thông số
Lấy mẫu: 26 thông số	
II. PHÂN TÍCH MÔI TRƯỜNG	
Khí thải: 10 thông số	
(Chỉ tiết phương pháp thử, giới hạn phát hiện của các thông số được chứng nhận kèm theo Quyết định số: /QĐ-BTNMT ngày tháng năm 2022 của Bộ trưởng Bộ Tài nguyên và Môi trường)/.	
Hà Nội, ngày tháng năm 2022	
KT. BỘ TRƯỞNG PHỤ TRƯỞNG  Vũ Tuấn Nhân	

2. Exhaust gas treatment system performance test

Based on the survey and performance test of exhaust gas treatment system in Japan with more than 40 years of experience by Chugai Technos Corporation, we ensure to provide reliable, accurate and relevant data, continuous and timely emission parameters for the operation team. Based on the performance test results, it is possible to understand the current condition and actual performance of the system so that solutions can be made to improve performance and prolong the life of the instruments.

Chugai Technos is equipped with a modern equipment system that complies with JIS and USEPA standards, which can flexibly meet almost all emission monitoring positions in the factory. Chugai Technos provides performance test services in thermal power plants, including: boiler combustion tuning test, AIG (ammonia injection grid) tuning, performance test for SCR (selective catalytic reduction), APH (air preheater), ESP (electrostatic precipitator), FGD (flue gas desulfurization), ME (mist eliminator), etc. and similar system of petrochemical refinery, cement plant, incinerator, other production facilities.

Performance test services at thermal power plants of Chugai Technos as follows:

Item	Measurement and analysis	Confirmation and improvement
Boiler combustion performance test	Temperature, pressure, flow rate, NO _x , CO, O ₂ , SO ₂ , SO ₃ , dust, unburned carbon, coal fineness	Air ratio balance, coal mill efficiency, combustion efficiency
SCR performance test	Temperature, pressure, flow rate, NO _x , O ₂ , SO ₂ , SO ₃ , NH ₃ Analysis of catalyst, fly ash	NO _x removal efficiency, NO _x outlet, ammonia slip, NH ₃ /NO _x molar ratio, SO ₂ conversion rate Evaluation of catalyst performance
AIG Tuning	NO _x , O ₂ , NH ₃	NH ₃ consumption, outlet NO _x distribution, AIG optimization
APH performance test	Temperature, pressure, CO ₂ , O ₂	APH leakage coefficient, thermal conversion efficiency, pressure loss
ESP performance test	Temperature, pressure, flow rate, dust, unburned carbon Analysis of fly ash	Dust collection efficiency, dust concentration distribution
FGD performance test	Temperature, pressure, flow rate, SO ₂ , SO ₃ , dust	Desulfurization efficiency, SO ₂ concentration distribution
ME performance test	Mist concentration	Mist removal efficiency

3. Pipeline scale and blockage inspection

Through the Scale Checker device, it is possible to quickly check the presence of scale in the pipeline and the blockage rate. Besides, it is possible to analyze the composition of the scale and display the results as a percentage of the element

Advantages: No need to remove pipes, insulation materials; it is possible even when there is fluid in the pipeline, during plant operation.

Application: pipelines in factories, pipelines, sea water pipes, powder conveying pipes, gas pipes, water supply and drainage pipes, etc.

4. Non-destructive testing (NDT)

NDT stands for Non-Destructive Testing and refers to a series of testing methods that allow the evaluation and collection of data about materials, systems or components without causing change or damage for objects to be inspected. Chugai Technos coordinates with qualified parties specializing in providing NDT services below:

- Visual Testing (VT);
- Ultrasonic Testing (UT, PAUT);
- Magnetic Particle Testing (MT);
- Liquid Penetrant Testing (PT);
- Eddy Current Testing (ECT);
- Radiographic Testing (RT);
- Leak Testing(LT);

5. Greenhouse gas (GHG) inventory, energy saving diagnostics and optimization

Synthesize annual energy consumption, calculate GHG emissions, propose mitigation measures, develop a mitigation plan, and verify the effectiveness of the mitigation plan.

6. Material structure and composition analysis

Chugai Technos coordinates with analysis centers to provide material structure and composition analysis services.

- Analyzing scale, plaque inside pipes, material surface coatings using modern physicochemical analysis methods (XRD, SEM, EDX, XRF, XPS, FT-IR, etc.)
- Analyzing most elements in the periodic table; their isotopes, hybridization states and forms of existence.

Advantages: diverse sample types, does not require a large amount of sample (0.1g can still be analyzed), suitable for analyzing foreign substances appearing during production operations or during product preservation.

Application: planning and implementing measures to handle and prevent incidents occurring with equipment; providing assessments of product purity and material composition.

7. Equipment trading

Chugai Technos is a close partner of many equipment manufacturers from Japan and other countries, we ensure prompt delivery of high quality products with clear origin.

Chugai Technos Vietnam Co., Ltd. specializes in providing the following products:

- Environmental monitoring and analysis equipment;
- Continuous emission monitoring system (CEMS);
- Various analytical equipment and instruments;
- Non-destructive testing equipment;
- Endoscopy equipment and industrial microscopes;
- Infrared camera;
- Ultraviolet inspection lamps;
- X-ray related equipment;
- Penetration testing chemical;
- Japanese rice husk water purifier.

TYPICAL PROJECTS

Chugai Technos has implemented many domestic and foreign projects. The following is a list of some typical projects implemented.

No.	Project	Service	Location
A	Domestic projects		
I	Performance test – System adjustment		
1	Vung Ang 1 Thermal Power Plant	Boiler combustion tuning test and AIG tuning for SCR system Unit 2	Ha Tinh
2	Van Phong 1 Thermal Power Plant	Air balance test, coal fineness test, boiler combustion tuning test and performance test for Unit 1, 2 FGD pre-performance test for Unit 1, 2 FGD performance test for Unit 1, 2	Khanh Hoa
3	Duyen Hai 1 Thermal Power Plant	AIG tuning and SCR performance test for Unit S1, S2	Tra Vinh
4	Nghi Son 2 Thermal Power Plant	ESP performance test for Unit 1, 2	Thanh Hoa
5	Vinh Tan 2 Thermal Power Plant	AIG tuning for SCR system Unit S1 SCR performance test for Unit S1, S2	Binh Thuan
6	Vinh Tan 4 Extension Thermal Power Plant	FGD performance test	Binh Thuan
7	Mong Duong 2 Thermal Power Plant	SCR performance test for Unit 2 APH performance test for Unit 2	Quang Ninh
8	Formosa Dong Nai Thermal Power Plant	SCR performance test for Unit VN1, VN2, VN3	Dong Nai
9	Thai Binh 1 Thermal Power Plant	ESP performance test for Unit 1, 2 FGD performance test for Unit 1, 2	Thai Binh
10	Dai Dong Waste Treatment Plant	Performance test of rotary dry incinerator of Takasago	Hung Yen
II	Environmental monitoring		
1	Acecook Vietnam Joint Stock Company	Monitoring ambient air and working environment – 3 factories Stack emissions monitoring – 3 units	Ho Chi Minh City
2	Kraft of Asia Paperboard & Packaging Co., Ltd	Stack emissions monitoring – 4 units Biomass exhaust gas monitoring	Ba Ria - Vung Tau
3	Duyen Hai 3 Extension Thermal Power Plant	Stack emissions monitoring	Tra Vinh

No.	Project	Service	Location
4	Nitto Denko Vietnam Co., Ltd	Survey of corrosive substances in the air at factory No. 3, 4	Binh Duong
5	Vinh Tan 4 Thermal Power Plant	Stack emissions monitoring	Binh Thuan
6	Formosa Ha Tinh Steel Factory	Stack emissions monitoring	Ha Tinh
7	LIXIL Vietnam Global Manufacturing Co., Ltd	Stack emissions monitoring – 2 units	Dong Nai
8	Nghi Son Cement Factory	Stack emissions monitoring – 2 units	Thanh Hoa
III	Non-destructive testing		
1	Vina Washin Aluminum Co., Ltd	Ultrasonic testing (UT) of cylinder	Binh Duong
2	Maruichi Sun Steel Joint Stock Company	Ultrasonic testing (UT) of transformer welds	Binh Duong
3	Toyota Industrial Equipment Vietnam Co., Ltd	Ultrasonic testing (UT) of die casting machines	Hung Yen
4	Ecoba Environmental Technology Co., Ltd	Penetrant testing (PT) of welded part	Bac Ninh
5	Denka Advanced Materials Vietnam Co., Ltd	Penetrant testing (PT) of welded part	Hung Yen
IV	Material analysis		
1	Mikuniya Corporation	Analysis of digester sludge composition	
2	Naito Vietnam Co., Ltd	Analysis of material composition	
3	Sumitomo Forestry Viet Nam Co., Ltd	Analysis of wood chip and wood pellet composition	
4	Taikisha Vietnam Engineering Inc.	Analysis of plaque composition inside the chimney	
V	Supply equipment		
1	Seiko PMC Vietnam Co., Ltd	Supply and installation of 03 continuous emission monitoring systems – CEMS (temperature, pressure, flow, NOx, SO ₂ , CO, CO ₂ , O ₂)	Ba Ria - Vung Tau
2	TOTO Vietnam Co., Ltd - Hung Yen Branch	Supply and installation of toxic fume hoods and water filtration systems	Hung Yen

No.	Project	Service	Location
3	Victory Instrument Joint Stock Company	Provide 01 set of emission monitoring equipment according to JIS method and 02 sets of dioxin sampling equipment in the air	Ho Chi Minh City
4	Nikkiso Vietnam MFG Co., Ltd	Provide temperature and humidity test chamber equipment	Hưng Yên
5	Vinh Hung Technology Scientific Equipment Co., Ltd	Provide 01 set of JIS emission monitoring equipment and 01 set of Dioxin sampling equipment in the air	Ho Chi Minh City
6	Sirius Corporation – Japan	Supplying 12 sets of ultrasonic thickness measuring devices for Vietnam Coast Guard	Ha Noi
7	Vinh Hung Technology Scientific Equipment Co., Ltd	Supply 01 set of equipment to sample Dioxin in the air	Ho Chi Minh City
8	V-Stainless Steel Co., Ltd	Supplying handheld XRF analyzer	Dong Nai
B	Foreign projects		
1	Paiton Thermal Power Plant	ESP performance test for Unit 7, 8	Indonesia
2	Jimal East Thermal Power Plant	APH, ESP, FGD performance test	Malaysia
3	Sipat Thermal Power Plant	SCR performance test	India
4	Sem Calaca Thermal Power Plant	Boiler combustion tuning test	Philippines
5	Manjung Thermal Power Plant	SCR performance test	Malaysia
6	Linkou Thermal Power Plant	SCR performance test	Taiwan
7	Arzew Ammonia and Urea Plant	Monitoring and analyzing NH ₃ during commissioning	Algeria
8	Petro Rabigh IWSP Phase II Plant	FGD performance test	Saudi Arabia
9	Guacolda Thermal Power Plant	Performance test for boiler, SCR, APH, ESP, FGD and stack emissions monitoring	Chile

EQUIPMENT SYSTEM

Environmental Monitoring Department





Environmental Analysis Department



PROJECT PICTURES



▲ Monitoring of exhaust gas temperature, pressure



▲ Monitoring of moisture content

▲ Determination of gas composition



▲ SO₂ sampling

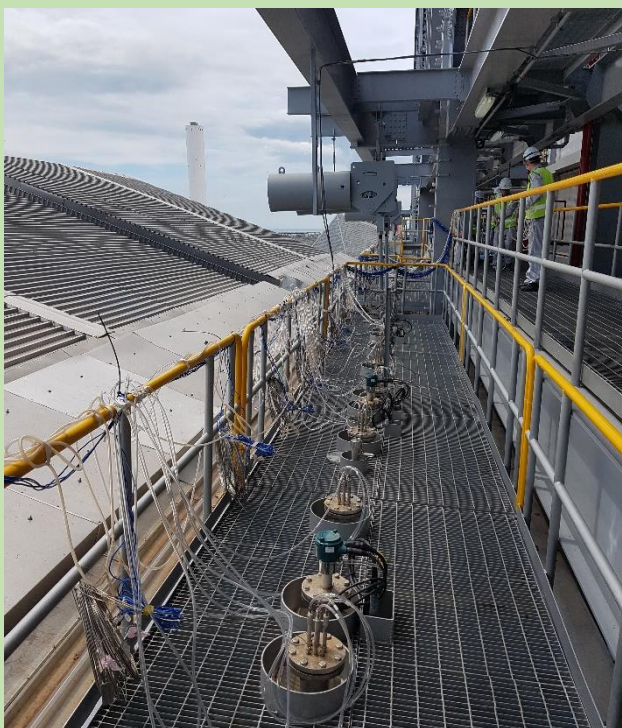
▲ NH₃ sampling



▲ Continuous monitoring of pollutants



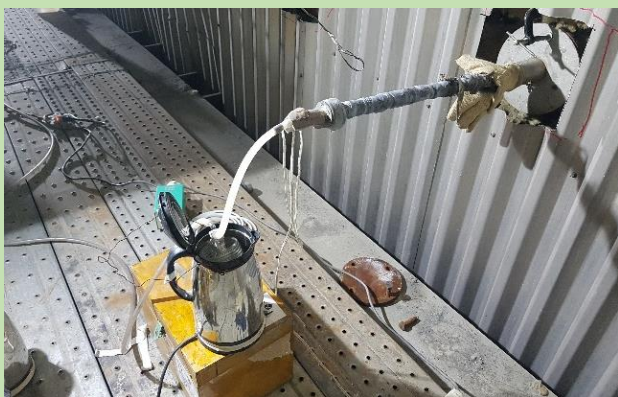
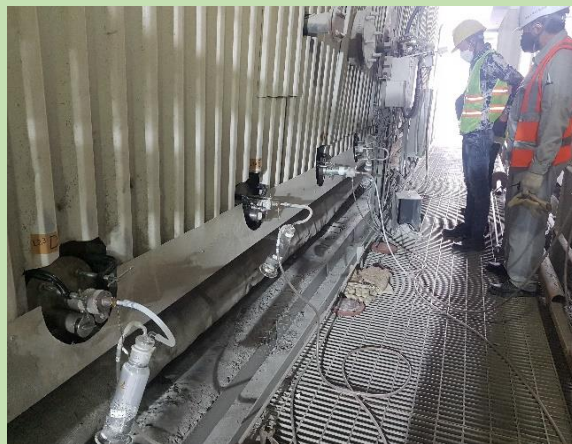
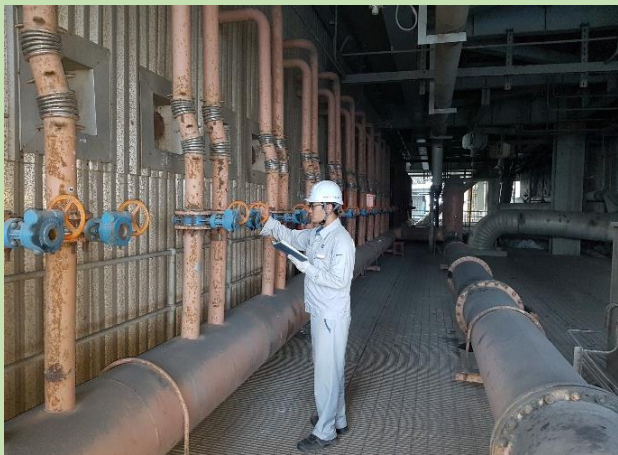
▲ Dust sampling



▲ APH performance test



▲ FGD performance test



▲ SCR performance test



▲ ESP performance test