



Introduction of Super Condenser, Carbon Capture and Separation Technology by CCL (Carbon Clean) and, EV Fast Charger

1. Super condenser | Download Catalog

This is an item attached to outdoor unit of the air conditioning system, no maintenance cost. It can reduce electricity bills by around 10% and, improve air conditioner efficiency which will contribute to cost reduction and ESG. This product is handled by Marubeni Protechs Corporation, Marubeni Corporation's subsidiary.

2. Carbon Capture and Separation Technology by CCL | Download Catalog

Marubeni Corporation invested in CCL to co-develop in carbon capture projects. Carbon Clean is a global leader in carbon capture solutions for hard-to-abate industries such as cement, steel, refineries and energy from waste. Their patented technology significantly reduces the costs of carbon capture when compared to conventional solutions. The company is leading innovation in the CCUS market and has developed a fully modular technology – CycloneCC – that is set to disrupt the sector. CycloneCC is a fully modular, pre-fabricated and skid-mounted carbon capture solution that reduces the overall cost of carbon capture by up to 50% and has a footprint that is up to 50% smaller than conventional carbon capture units. To learn more about Carbon Clean and their breakthrough technology, CycloneCC, please visit www.carbonclean.com

3. EV Fast Charger | Download Catalog | Download Specification

Nowadays electric vehicles become more widespread, Marubeni Corporation provides 50 – 350 Kw EV fast charger manufactured by SIGNET, of which we are sole distributor all over the world except for Korean. In North America, SIGNET has the second largest market share of EV Fast charger after Tesla. We can confidently say that this is a global highest standard product.











TTCL & BLACKWOOD TECHNOLOGY



TTCL is reputable and all-round EPC Engineering, Procurement and Construction company with long-standing experiences and expertise in petrochemical, chemical, power and fertilizer plants.

In addition to EPC business, TTCL had challenged development and investment into power generation and environment business including biomass torrefied pellet production as a new kind of business.

To proceed torrefied pellet production and replace the fossil fuel TTCL has acquired "Blackwood Technology", a Dutch company, which owns intellectual property and rich experience for torrefied pellet production TTCL is ready to provide the whole value chain of this business including Intellectual Property, EPC, Operation and Maintenance, and Investment.

Introduction of the black (torrefied) pellets project

- 1) Manufacturing Torrefied Pellet/Black Pellet from White Pallet made of wood agricultural residues, etc. with Torrefaction Technology owned by Blackwood Technology, a Dutch company.
- 2) Torrefaction process is the slow heating of biomass to maintain the calorific value of biomass as much as possible. With this process, the calorific value per unit can be improved by approximately 20% as compared to normal pellets.
- 3) Torrefied Pellet/Black Pellet
 - Possess the same calorific value as sub-bituminous coal.
 - Possess resistance towards rain and water and can be stored outdoor to help reduce warehouse costs.
 - Possess high grindability, which enables its use in pulverized coal burning boiler.
 - Can be used as an alternative fuel for coal and help increase co-firing rate by around 30%.













SIAM TAKUMA CO., LTD.



New value created with our biomass power plant and waste-to-energy plant.

With our work on biomass power plant and waste-to-energy plant, we are convinced that our business is indeed sustainable and indispensable to the society. By sharing such technology to Thailand and other Southeast Asian countries, we hope to contribute to achieving carbon neutrality through the replacement of fossil fuel and reduction of environmental burden.

We can design and supply plants optimized to meet various demands based on our accumulated experience and know-hows with our own combustion and boiler technology. The power generation scale is approximately 2MW-50MW and higher, all while a stable operation and high efficiency (excellent energy-saving features) are achieved.













GO-FOR-IT CORPORATION LTD.



Introduction of ECO VISION

Eco vision is energy-efficiency system for controlling the water pump of central air conditioning used in large scale buildings. Patented eco vision not only does reduce the Co2 emission, but also save the cost of electricity from 30% to 65% by automatic 24 hours real-time internet-controlled system with responsible support.

Eco vision provides the latest technology to meet the end user's requirements such as visible by monitoring, traceable by history, and controlled by internet. More than 1000 buildings and facilities are installed in Japan in good performing condition presently and still expanding. In Thailand, Samitivej Thonburi has been installed since 2021 and performing 60% savings as an average. Samitivej Chonburi will be installed within this year and Samitivej Sukhumvit will be installed next year.

Eco vision also provides friendly payment scheme; that is, customers pay eco vision within their electricity saving amount. In another words, you pay as you save. Comprehensive return & payment proposal will be made upon your result.

Our mission is to appreciate and support our mother nature to stay healthy with eco vison.













NIPPON THERMOENER (THAILAND)

บริษัท นิปปอน เทอร์โมเอเนอร์ (ไทยแลนด์) จำกัด ผู้ผลิตเรื่องทำความร้อนของ ประเทศญี่ปุ่นที่มีประวัติยาวนานกว่า 80 ปี เรามีผลิตภัณฑ์มากมายโดยเริ่มจาก Boiler ที่ใช้ งานทั่วไป อาทิ Boiler แบบน้ำไหลผ่านครั้งเดียวหรือเครื่องทำน้ำร้อน ฯลฯ และ Boiler ชนิด พิเศษ อาทิ Fire-tube boiler, Water tube boiler, Hot oil boiler ฯลฯ เรามุ่งมั่นในการลด การใช้พลังงานและแก้ไขปัญหาสิ่งแวดล้อมในฐานะที่เป็นบริษัทด้านวิศวกรรมด้วย

แนะนำผลิตภัณฑ์ Boiler และ Vacuum Type Water Heaters

- 1) High Efficiency Once Through Boiler
- 2) High Efficiency Vacuum Type Hot Water Heater

Nippon Thermoener (Thailand) Co., Ltd., a Japanese manufacturer with a more than 80-year history in the boiler market, offers a diverse range of products ranging from general-purpose boilers such as single-flow water boilers or hot water boilers, etc., to boiler types. Specialties include fire-tube boilers, water-tube boilers, hot oil boilers, and so on. As an engineering firm, we are dedicated to reducing energy consumption and solving environmental issues.

Introduction of Boiler and Vacuum Type Water Heaters.

- 1) High Efficiency Once Through Boiler
- 2) High Efficiency Vacuum Type Hot Water Heater













Introduction of AGC-SunEwat Energy-generating glass solutions

AGC solves everyday challenges with its world-leading, leading-edge technologies, contributing to sustainable development to help ensure a bright future for our planet. Using the world's top-class technologies cultivated through a history of technological innovation extending over 100 years, AGC has continued to achieve the creation of new values in the business areas of Glass, Electronics, Chemicals, and Ceramics.

AGC's range of SunEwat Building Integrated Photovoltaics (BIPV) is the ideal smart glass solution for on-site renewable energy. SunEwat harnesses advanced and high-quality photovoltaics-embedded technology to generate solar energy while delivering comfort and strikes the perfect balance between efficiency and aesthetics. Made with the latest technology from AGC Europe and Japan, SunEwat is available in transparent and opaque solutions, offering designers limitless architectural and aesthetic options and ensuring seamless integration into buildings. SunEwat also boasts environmental performance and efficiency ratings consistent with nearly zero-energy building (NZEB) standards.

The SunEwat BIPV will be exhibited at the Sustainable Energy Technology Asia 2022 within the JAPAN PAVILION to bring across AGC BIPV technologies. With SunEwat BIPV, the impact of climate change and effects of future energy shortages in the Asia Pacific Region can be reduced with the use of reliable, clean, and green electricity.









MITSUBISHI HEAVY INDUSTRIES, LTD.



Mitsubishi Heavy Industries (MHI) Group will contribute to the realization of net zero emissions throughout society.

We provide wide range of decarbonization technologies, including energy transition, energy conservation, electrification, and carbon capture technologies.

Although decarbonization has become an important issue in Southeast Asian countries, the effect of reducing CO2 emissions through the use of solar power generation is limited, The most important factor in reducing CO2 emissions is to analyze the current situation by dividing the emission sources into Scope-1 (direct emissions) and Scope-2 (indirect emissions), and then to select an appropriate solution.

Scope-1 one of solutions of decarbonization is CO2 capture plant, and Scope-2 solutions of decarbonization are energy management system (EMS) that realizes energy-saving operation, high-efficiency Centrifugal Chillers, as well as gas engine generators and fuel cells (SOFC: Solid Oxide Fuel Cell) for in-house power generations. We will also consider using hydrogen and ammonia for on-site power generation in the future.

In addition, if there is waste heat (heat that is discarded without being used) in the factory, we will propose the utilization of waste heat recovery.

https://www.mhi.com/jp/

http://www.mhit.co.th/











TOSTEM THAI CO., LTD.



แนะนำผลิตภัณฑ์ระบบเซลล์แสงอาทิตย์ (Solar System)

เพื่อประชาสัมพันธ์และนำเสนอรายละเอียดเกี่ยวกับธุรกิจใหม่ (การจำหน่ายระบบเซลล์แสงอาทิตย์)

- 1) นำเสนอเกี่ยวกับการติดตั้งระบบเซลล์แสงอาทิตย์
- 2) นำเสนอเกี่ยวกับอุปกรณ์สำหรับติดตั้งแผงโซลาร์เซลล์
- 3) มองหา Business Partners เช่น EPC Providers สำหรับระบบเซลล์แสงอาทิตย์
- 4) นำเสนอวิธีการประหยัดพลังงานในอาคาร

Introduction of Solar system

With the launch of our new business (solar system sales), we'd like to join the exhibition for its promotion and for making proposals to the visitors.

- 1) Proposal of solar system installation.
- 2) Proposal of mounting hardware of solar system panels.(PV Clamp)
- 3) Looking for business partners, such as EPC providers for solar systems.
- 4) Proposal of methods to reduce energy consumption of buildings.









NANATSUBAKI INC Z-CURE@



Introduction of Smart Container Residence, Z-CURE® and Super-K

1. Smart Container Residence | <u>Download Catalog</u>

Develop and sales of a 100% stand-alone container house called "Smart Container Residence". It can be used as an evacuation shelter in case anything happen to the earth. It is completely autonomous, with off-the-grid oxygen, water, electricity and so on.

2. Z-CURE® | Download Catalog

Develop and sell "Z-CURE ®", an UV-C deep ultraviolet sterilization device. It is a cutting-edge sterilization device with indoor air circulation. The UV-C lamp used is registered by UNIDO as the only ultraviolet sterilizer lamp and boasts a world-class sterilization ability. The lamp is electrode-less UV-C with a long service life, and as such, it has a far longer lifespan with more powerful emission intensity as compared to UV lamp with LED or straight pipe. The lifespan of this indoor air circulation type UV-C sterilization device using UV-C 254 mm lamp is 50,000 hours, with 3-year warranty. All of the models use the powerful electrodeless sterilizer lamp, which can quickly inactivate various viruses such as Covid-19 virus (incl. the mutated species) and influenza virus, as well as bacteria, and mold funguses like black molds.

3. Super-K | Download Catalog

Sell a revival technology "Super-K" that prevents the deterioration and extends the lifespan of lead batteries that are used or being used. By extending the lifespan of lead batteries, which are the most consumed across the world, we can significantly reduce the environmental burdens.





