

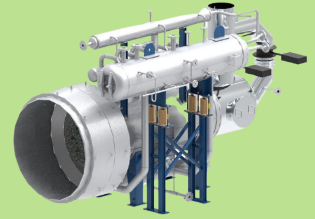


# GETABEC Group

The Solution Provider

Energy Systems

## MESSAGE FROM THE CEO



GETABEC recognizes that all our work and all our action will have an impact on society and that our products will change the environment.

We are committed to work on designing and manufacturing our products with a holistic perspective of humans and the environment.

We are aiming towards sustainability, which will benefit the environment and our society.

With our key values:

- Social Responsibility
- Quality
- Technology

GETABEC aims to grow by partnering with our customer.

GETABEC strives towards continual improvement of our product and performance

With innovation GETABEC is aiming to make this world a better place.

Statement by

**Mr. Suchat Mongkhonaripong**

Chief Executive Officer  
GETABEC Public Company



## About us



In 1983 the company GETABEC was formed to sale, distribute and install German steam boilers and related equipment in Thailand. During the strong industrialization of Thailand the demand for fire tube boiler increased. The cooperation with German Companies and know how providers led to the name "German Thai Boiler Engineering Company or in short GETABEC.

In the nearly 40 years of history GETABEC has emerged as one of the leading Boiler and Pressure Vessel Manufacturer in South East Asia. Two factories in Thailand with state of art production facilities, a team of multi-discipline Engineers, a motivated and high skilled work force ensure that each request is treated with required attention.



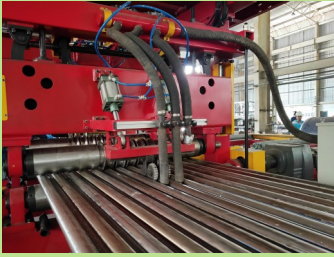
Starting with the formation of GETABEC until now, it is always the desire of GETABEC to fulfill the customer requirements towards quality and reliability of products services. Already in 1995 Getabec implemented a quality management system covering all process in the organization. GETABEC also implemented a quality control system to ensure that our boilers are meeting the strict requirements of the ASME code as well of the European Directive for Pressure Equipment. On request by the client,

GETABEC will be able to deliver the boiler and pressure vessel either with the CE Mark or as stamped ASME Boiler and pressure vessel.

GETABEC has delivered boilers and pressure vessels in all parts of the world. It also started its international sales network by opening of GETABEC Vietnam Co., Ltd in 2014. In 2019 GETABEC formed together with its long term Partner Schneider Kessel Germany an Engineering Company, as Schneider Energy System GmbH, not only to cater the European Market, but also to support GETABEC's desire to design highly efficient and environmental protecting products



## OUR PRODUCTION



## PRODUCTION MEANS QUALITY

It started around 40 years ago with a vision, to provide excellent steam boilers to Thailand by cooperating with the German Boiler manufacturers. As the demand for quality boilers was rising, GETABEC added the manufacturing of Firetube boilers under the license of Schneider Kessel Germany to its scope. The factory in Bangplee, close to Bangkok was established. From the beginning of production, it was a clear objective for everybody involved: NO COMPROMISE ON QUALITY. The workshop, the workforce was certified by the German inspection and certification authority TUV to the German Pressure Vessel and Boiler Code,



later than changed to the European Approval in accordance to the European Pressure Equipment Directive (PED). The combination of approved design and approved processes enables GETABEC not only cater the local market but also to fulfill the demand of international clients.

The international approvals was expanded to the ASME registration to ensure that all customer requirements are met. In 2004 GETABEC opens its second factory in Rayong the center of the heavy industry in Thailand. The new factory was equipped with the state of technology machinery for the production of water-tube boilers. Of large size. Ad-

ditional equipment for the production of submerged arc welded gas-tight membrane walls was added, together with a membrane –wall bending machine.

A team of designers, production engineers, quality control engineers working closely together with production control and planning, to ensure that each order is executed to ensure that all requirements of the customer are met.

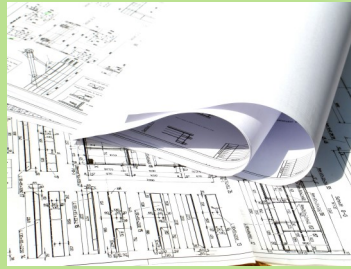
GETABEC's holistic view and the change to be a solution provider, also the two factories had to add new products in their manufacturing program. With the development of GETABEC's biomass boiler, GETABEC started also to manufacturer their own Dynamic Step Grate. All boiler house equipment from feedwater tank with its de-aerator, blow down tanks, steam header, manifolds, boiler house piping to external process piping can be manufactured in-house.

The Instrumentation and control department produce their own control units including the programming of the required software.

Manufacturing does not stop on the gate of the factory. The erection on site is also integrated in quality management system and forms also a part of the PED and ASME approval



## THE SOLUTION PROVIDER



## THE GETABEC SOLUTION

Environmental friendliness is the governing concept in **GETABEC** using technologies which have been proven records in the world. We are using the services of technology provider from the world over to provide the state of art technology to our clients

Technologies and process are changing on a nearly daily basis. The laws the customer requirements are driving the requirements to provide environmental, safe but also economical feasible products to our more and more technology driven world. Customers sometimes feeling overwhelmed with the quantity and variation of products. How to select the best boiler? What is the environmental impact? What is the automation degree in the operation?

Questions which will be answered by the GETABEC Team. We offer the complete solution from planning to the selection of the boiler and other related equipment, from manufacturing and expediting, delivery and installation to commissioning and training. As the latest add on service we offer the **operation of the boiler plant** and/or the **supply of steam** to our client. GETABEC offer the all-around carefree solution

### Complete Project Management Solution





# THE TAYLOR-MADE SOLUTION



**GETABEC's Boiler will help to reduce your environmental foot print by providing you with a sector specific solution**

How to select the most suitable Steam Boiler

Each industry has their specifics. What is the process? Does the steam comes in contact to the process? Do we have waste heat which can be utilized to produce steam? Do we have waste , which can be used as biofuel? What is the peak load? Do we need an redundancy system? What type of fuel is available, at which price? What is the Environmental impact? Can we use renewable fuels to reduce the emission value?

So Many questions but only one answer: GETABEC

**The answers can not be generalized and have to be carefully evaluated together between GEATEBEC's experts and the Cus-**

## OUR PRODUCTS

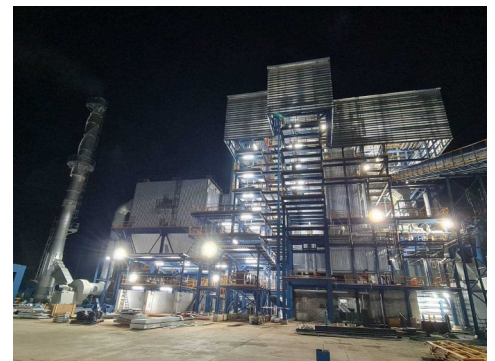
The process of industrialization started with the development and the invention of the steam engine and the steam boiler. After more than 150 years, steam is still the life line in most of the process industries. We need head, we need energy to process the products. the basic principles did not change. We have modernized the process, we have increased the efficiencies, we have decreased the environmental impact, but still the basics are the same we change the water to steam, we increase the pressure to inject more energy in steam.

For many years the slogan was, bigger, higher pressure and higher output. With the general environmental awareness, the desire to reduce the carbon footprint, this has changed. Fossil fuels will be replaced by CO2 neutral fuels. Renewable energy will replace the conventional way of energy generation. This is especially visible in the power sector, where solar, wind, geothermal electricity is contributing slowly the majority of electricity generation. In the Process industry the trend goes to biomass and bio-gas firing systems. Also the heat recovery of process waste heat, the extreme increase of efficiency, the substitution of conventional (fossil) fuels with new fuels, such as synthetic fuels, or Hydrogen will follow. GETABEC 's engineering team, will evaluate and design together with our clients the best process using modern technologies. We understand that our product have an

impact on the environment. Together we can change the world step by step. From a small Electro Boiler of 100kg of steam to a water-tube boiler producing 200,000kg of steam per hour, there is no one fits all solution. Each case is different, each project has its special task. Standardized products in combination with tailor-made products could be the answer. A large amount project cost can be saved if in the initial stage of the project a holistic approach will be chosen. Planning and design will define the output of the project not only from the performance of the equipment but also the costing. In addition the correct selection of the used technology will result in an optimal output and environmental performance.

that Steam is often the life line of the business.

**GETABEC PARTNERS WITH THE CUSTOMER**

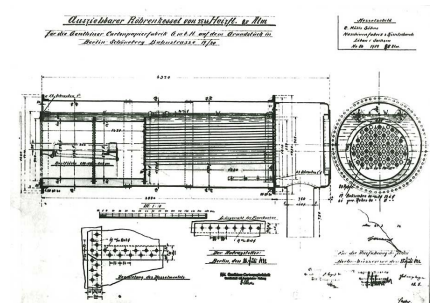


# OUR PRODUCTS



## Firetube Boiler History means experience

The GETABEC Shell Boiler is the working horse in the Industry. It is designed and manufactured to the European Code for Shell Boiler EN12953. All our design has been approved by TÜV of Germany. GETABEC is using the time approved design under the license of Schneider Kessel Berlin Germany. Experience an innovative design is the symbiosis which creates State of Art Boiler. GETABEC single and double furnace tube boilers are high efficient steam and hot water boilers for every application, in various designs with energy saving system and fully automatic operation without need of constant supervision. These boilers designed to the three pass, wet-back principles.



The water content can be quickly transformed into steam. Our boilers always have sufficient steam reserve, even during sudden peak demand period. Using gas, oil or dual fuel burner, the flame intensity is matched virtually instantly to the steam or hot water consumption, taking into account the fuel characteristic.

The GETABEC Boiler can cope easily with peak and low demand periods for steam or hot water. The Boiler can produce saturated steam, superheated steam and high pressure hot water GETABEC not only supplies the boiler, but also the boiler house equipment such as Feedwater system from treatment, deaeration to chemical dosing, condensate Recovery system and boiler house piping.

### High pressure steam generators Double Flame-Tube

Output up to 41 t/h with light oil  
Output up to 52.2 t/h with natural gas



### High pressure steam generators Single Flame-Tube

Output per boiler up to 35 ton/ hr.  
Operating pressure up to 24 bars



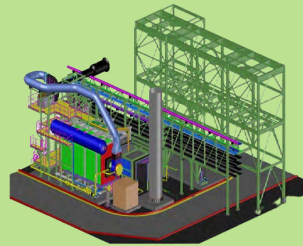
### Hot Water Generators Single Flame-Tube

Output per boiler from  
650 kW to 9700KW





## OUR PRODUCTS



### Water-tube Boiler Creativity at its best

The Firetube boiler have their limitation in pressure and the amount of steam generated. Larger boilers but also boilers for special purpose are design as water-tube boilers . With a Superheater the boiler will be capable to deliver steam with temperatures above 500C

GETABEC in most application will chose the corner-tube boiler, a boiler with a single drum, self supporting and easy to erect on side. If the transport on ship or street allows, the units are fully assembled in our workshop and will be send as a “plug and operate” to the site. Installation time and commissioning time is reduced to a bare minimum

In case of large boilers the unit can be delivered in modules, which need very little welding work on site.

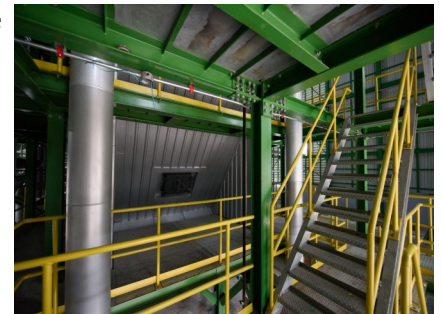
Water tube boilers will be used for all types of fuels including waste heat from the gas engines and gas turbines, operational processes.

To increase the efficiency economizer to pre-heat the feedwater and air-preheaters can be attached to increase the efficiency GETABEC’s water-tube boilers are produced in our Factory in Rayong Thailand. The customer has the choice to chose the standard ASME or EN 12952 following the European Directive for Pressure Equipment.



GETABEC manufactures also boilers in accordance to customer requirements and specification. GETABEC will interact between the various authority and provide the required liaison with other interested parties.

Beside the large boilers with large steam production, water tube boilers are also used for smaller boilers for specialized application, where high pressure and temperatures is the key issue.



The application of water tube boilers is manifold, in power station where a single boiler can deliver more than 2000 T Steam per hour to a special boiler of high pressure and temperature steam for special application in the chemical industry. Water tube boilers are used as biomass boiler, in waste to energy boilers as heat recovery boiler. Steam generation without the use of water-tube boiler is unthinkable. Many different types, various design have to be evaluate to define the right boiler for our clients. GETBEC has process engineers from various industrial fields, which will assist our customer to select the right boiler

**ECONOMICAL— ENVIRONMENTAL FRIENDLY—RELIABLE—GETABEC**





# OUR PRODUCTS



## GETABEC BOILER DESIGN TO PERFORM



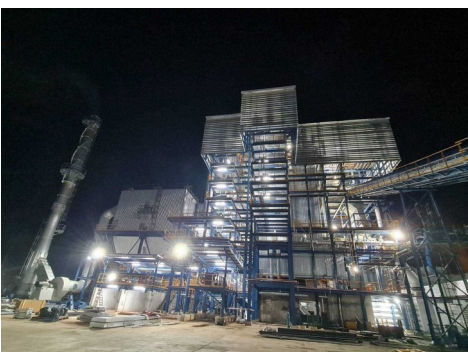
Today GETABEC's boiler can be found in all business sectors. With today's drive and our responsibility towards a better environment, GETABEC has modified, reengineered and upgraded our design for our boilers and steam and hot water generators. High efficiency paired with long lasting performance and reliability are the earmark of GETABEC Boiler.



Our fire-tube boiler design can be used as **heat recovery boiler** as stand alone unit equipped with a high efficient burner using all kinds of fuel, or in combination with a water tube boiler as a Combi Unit for the **biomass** fuel. Large water tube boiler will find their application in the power generation using **biomass** as fuel or as **heat recovery boiler** behind a gas-turbine or gas engine.



The process industry, which needs a steady performance with a high reliability and changing work loads rely on GETABEC's boiler.

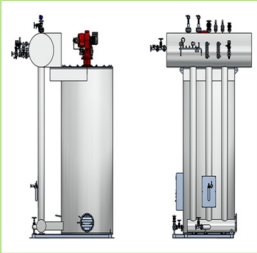


All our boiler are design, manufactured and tested meeting the strictest requirements of the international and national codes and standards.





# INNOVATIVE BOILER TECHNOLOGY



## ELECTRO BOILER

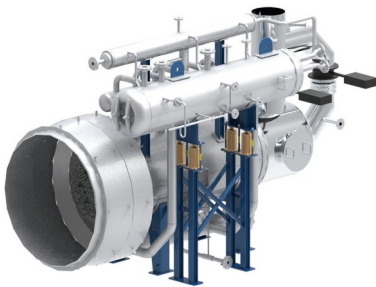
Together with our Sister Company **Schneider Energy System** we have developed a raw of model as E-Boiler. For us, the generic term “electric boiler” defines various products that we supply for the electrical provision of thermal energy.



These boiler systems include industrial steam and hot water supplies as well as municipal heating supplies. The decision in favor of an electrical energy supply instead of a conventional steam or hot water boiler system based on conventional primary energy (natural gas or light heating oil) is often based on very different factors. Reasons such as risk assessments, space conditions, operating hours, or air conditioning aspects can play a role. In addition in areas where photovoltaic could be applicable, the electricity generated could be used for the generation of steam. If the electricity is generated by renewable energies, the electro boiler have a zero Carbon footprint during operation

## SPECIAL PURPOSE BOILER

In 2019 GETABEC Plc. Ltd. of Thailand and Schneider Kessel Holding Company of Berlin/Germany formed a Joint Venture Company, the **Schneider Energy System GmbH**. The company develops special and new technology boilers. As the first product range we introduce the Schneider series of boiler for the palm-oleo and oleo-chemical industry.



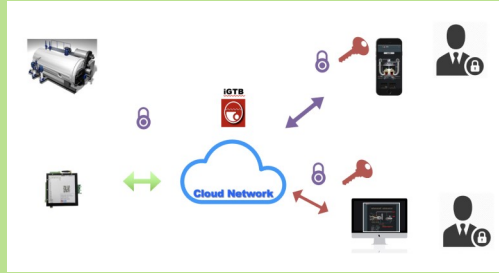
The right solution for every need:

- **Water tube boilers** as steam generators and hot water generators for small outputs and operating pressures for the chemical, food, and process industries
- **Waste heat boilers** in flue tube or water tube boiler design for energy recovery from waste process heat or exhaust gases from thermal power processes



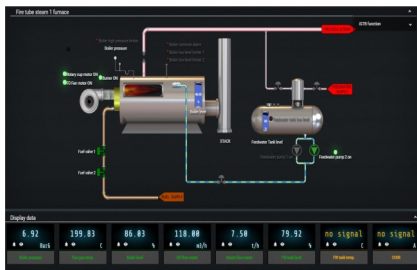


## OUR AFTER SALES SERVICES



## SMART BOILER MONITORING SYSTEM

The operation of boilers in the process industry is a supporting function in the company. Highly availability combined with low operational cost are the key factors. To allow uninterrupted operation a strict and comprehensive monitoring system is required. GETABEC together with our client have developed a modern cloud based boiler monitoring system.



Modern Boiler are operating nearly full automatic. Smaller Boilers are most of the time are auxiliaries and do not get much attention. As a consequence a close monitoring and recording systems does not exist. A lot a valuable information for the operation, environmental performance such as heat and energy losses are not monitored. Information from the operation should form a part of the preventive maintenance system. The GETABEC App for your PC Tablet or Smartphone shows all this information in real time . It can calculate cost of steam, monitors the thermal efficiency. An alert system will inform you about abnormalities in the operation.

**IGTB Smart Technology for your Boiler**

## PLANT SERVICE PACKAGE

**Regular inspection and preventive maintenance** is the route to a uninterrupted performance and the key for economical, reliable and safe operation

Defined service plans, executed by our qualified service team is the backbone of an uninterrupted and efficient operation. It is our aim not only to check and repair but to provide advise, help and assistance. GETABEC becomes a part of the operation. Services to our customer does not stop with the erection at side GETABEC offers the complete “No Worries Package”

Nothing is perfect. Even the best planned, manufactured with the best state of art manufacturing technique, with a consequent maintenance system there is still a residual risk of failure.

GETABEC offers **scheduled and emergency repair service**. Our 24H Hotline will response to your request immediately. The Feedback from the service department and our clients is used for a continual improvement of our Products. This know how is available to our customer for process improvement.

Steam and hot-water Boilers are very often act as the heart of the operation. Like the humans, equipment need a system to check for the physical health of the equipment. Regular check ups, professional assistance, careful operation, strictly following the instructions using of original parts are the best conditions for a worry-free operation.

We have Doctors and hospitals to take care Boilers have **GETABEC Boiler Clinique** with its experts to help.

Lifetime is exhausted buy a new equipment or let GETABEC repair, refurbish and upgrade the existing boiler. The efficiency package and the environmental package will complete service.

**The GETABEC Diagnostic System will evaluate the boilers condition including the auxiliaries.**



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