



#### WWW.TYGIENIC.COM



" We Offer Quality Products & Services with Integrity and Reliability "

# QUALITY PRODUCT

TYGIENIC's factory, opened in October 2005. Located in Thailand's Phetchaburi Province and occupying an area of approximately 15,000 sq.m., it has a great manufacturing capacity. The winner of the 'White Factory' provincial award strives to ensure high quality and high efficiency.

# **TYGIENIC'S FACTORY**



## **TECHNICAL** SUPPORTER



- 24 hours Standby Operation
- Confined space certified technicians and Engineers
- Safety equipment



Process Improvement / Consultancy

- Engineering Solution



### **Engineering Center**

- API-650, API-620
- TEMA





With long-standing experience in the construction of plants of milk, ice cream, various types of beverage and Petrochemical, TYGIENIC has experienced personnel capable to work closely with customers from the preliminary study of the project, design, fabricate and installation as well as offering the after sales services.

TYGIENIC could serve customers for all their requirements and in every type of products and can assure of their successful investment.



# **PRODUCT** CATEGORY

#### Sanitary Tank

Hygienic Design Tank Mixing Tank Heating/ Cooling Jacket Tank Silo Tank Process Tank Aseptic Storage Tank Ultra Mixer Milk Transportation Tank CIP Tank Filter Vessel Receiving Tank Fermenter Tank Phamaceutical Grade Tank

#### **Petrochemical**

Stack Storage Tank Pressure Vessel Piping Structure & Construction Heat Exchanger Distillation Column Reactor

#### Industrial

Dairy Beverage & Alcoholic Sauce & Seasoning Pharmaceutical Cosmetic Oil & Gas Petrochemical Sugar and Syrup Chemical Green Energy

### TYGIENIC IS CAPABLE TO DESIGN, FABRICATE AND INSTALL:

TYGIENIC could supply stainless steel tanks, vessels, mixers and processing equipment for liquid food processing, dairy, beverage, brewery, cosmetic, pharmaceutical and chemical plants.

With our experience and technical know-how from Europe, food grade and Hygienic tanks are our main products. Our factory is completed with fabrication facilities such as metal cutting, forming, welding and polishing equipment.





- Stainless steel grade 304, 304L, 316L, 316Ti and Duplex
- Surfaces roughness  $R_a \le 0.8 \,\mu\text{m}$  or up to  $R_a \le 0.4 \,\mu\text{m}$
- CIP (Cleaning In Place) spray ball
- Meet FDA, GMP, HACCP standards
- Heating and cooling media jacket
- Various types of jacket; half pipe, dimple, spiral etc.
- Reactor and Pressure vessel design follow ASME code.
- Radiographic testing and 3rd party inspection
- Chemical Passivation and Cleaning

# **COMPLETED** DESIGN

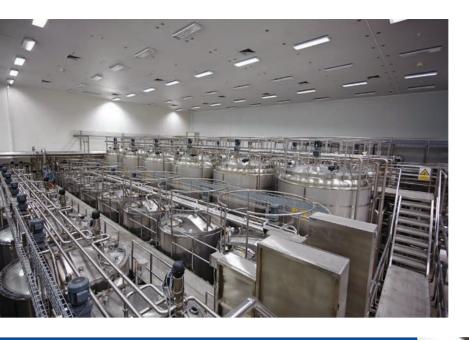
TYGIENIC is capable to design pressure vessel according to ASME Code. On top of this, we could also design the storage tank according to API-650, API-620 standard code with high experience engineers and modern calculation software to work on piping and structure.

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**Calculation Software** 

Auto CAD





#### HYGIENIC DESIGN TANK

Our tanks design meets GMP, HACCP, FDA Standards & Sanitary Concept. Tank surface can be polished to Ra < 0.8 micrometers or up to Ra < 0.4 micrometers depend on customer requirement. Tank surface

can be improved by chemical passivation and electro-polishing for pharmaceutical grade.

### **ASEPTIC STORAGE** TANK

The system provide buffer limitation in aseptic condition, between UHT sterilize unit and aseptic filler, Capacity of the system can be design according to processing time management and performance adjustable between UHT sterilize system and aseptic filler.





#### **MIXING** TANK

Pre-Mix Tank : Use for Mixing Ingredient in Liquid: Liquid, Liquid : Solid with medium or high speed mixer.

- Main Mix Tank : Use for Mixing Liquid Solution from Pre-Mix Tank together.
- Storage Tank : Use for Maintain Product in Homogenous before filling.



AGITATOR



# **SANITARY** TANK

#### MILK TRANSPORTATION TANK



#### JACKET TANK

Various types of Jacket Tank can be designed and produced upon heating/cooling load, pressure as required by customer such as dimple jacket, half tube jacket, chamber jacket, spiral jacket etc.





#### **STORAGE** TANK

Tanks design meets ASME, GMP & Sanitary Concept. With vertical agitator assemblies, and optional accessories depending on product application such as Mixing Tank, Storage Tank, Buffer Tank, Ageing Tank, etc.



DAIRY



PHARMACEUTICAL





SAUCE AND SEASONING





### FILTER VESSEL

Filter Vessel in various sizes depending on customers' enquiry from 1 basket up to 12 baskets in both steel and stainless steel.

# PETROCHEMICAL EQUIPMENT





The Highest Standalone Stack in Thailand (135 m.)

#### STACK

Steel stack in complete cycle including foundation according to customer's enquiry. Aside from this , we also have technology that should avoid stack vibration by installing Tune Mass Dapper (TMD) which would prevent any damage to the Stack.



#### **STORAGE** TANK

Storage tank for the Petrochemical Plants as well as for general food factories. Our supply would start from the design, fabrication and installation according to API-650, API-620 or ASME Codes depending on customers' requirement. In the past, we had supplied chemical storage tanks to Petrochemical Plant, food processing plants as well as various types of tanks for beer plants in which the roughness of tank surface must be suitable for CIP. We could fabricate both



#### PRESSURE VESSEL

Pressure Vessel according to ASME Codes. We could also build Process Tower in both stee and stainless steel.





### COLUMN

TYGIENIC Company Limited had emphasized the importance of the development of renewable energy as well the production process of both Bio-Ethanol and Bio Diesel all along. As a result, TYGIENIC is the only Thai owned company who could build Bio-Ethanol Plant on Turnkey basis using cassava chips and molasses as raw materials.







### **PIPING, STRUCTURE & CONSTRUCTION**

Any piping work according to customer's enquiry, the design is done by Auto Plant software which would give fast, accurate and precise outcome. On structure, we could design, fabricate and install the structure of Petrochemical Plant including various pipe supports.

# PETROCHEMICAL EQUIPMENT





#### **HEAT EXCHANGER**

Various types of Shell & Tube Heat Exchanger according to TEMA standard or ASME code as required by customer. We have modern drilling machine to work on the tube sheet and could work on either steel or stainless steel.

# **MAIN FACILITIES**



PRESSURE TEST



CNC CUTTING MACHINE



HEAD FORMING MACHINES



PLATE BENDING MACHINE



CNC DRILLING MACHINES



SUBMERGE ARC WELDING MACHINE



Head Office:

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#### **TYGIENIC'S FACTORY**

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