

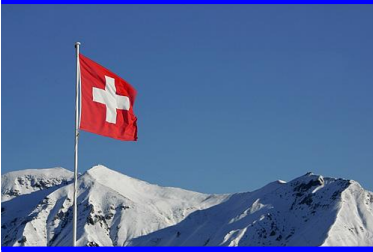


**FioTec (Thailand) Co., Ltd.**

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**Process Engineering**  
Project Consultants, Engineering,  
General Contractor

# Company Presentation



## Process Engineering Project Consultants, Engineering, General Contractor

Solvent Recovery Plant in South Korea



BSL3+ Laboratory in Thailand



Incinerator in Europe



Waste Water Treatment in Europe





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# COMPANY PROFILE

FioTec (Thailand) Co., Ltd.  
No. 320 Ekamai Soi 18  
Sukhumvit 63  
Bangkok 10110  
Thailand

Tel: +66-2-381-1060  
Fax: +66-2-381-1061  
E-Mail: [info@fiotec.com](mailto:info@fiotec.com)  
Web: [www.fiotec.com](http://www.fiotec.com)

## Project Consultants, Engineering, General Contractor for Turnkey Projects

We are a professional Swiss Engineering Team with production capabilities in Thailand working worldwide in the fields of process engineering.

We place high emphasis on quality, reliability and cost effectiveness and of course after-sales-service.

## Scope of Activities

- **BSL3+ and BSL4 bio safety laboratories**
- **Process Engineering services**
- **Solvent recovery systems**
- **High-speed floating dryers, process dryers**
- **Air pollution abatement systems**
- **Waste water treatment systems and plants**

## Company Ownership

Swiss / Thai

## Senior Management

Swiss Representative Office: Mr. Beat Rubin  
Technical Director: Mr. Peter Mueller  
Managing Director: Mr. Marcel Fiocchi

## Representative Office

**FioTec (Thailand) Co., Ltd.**

Mr. Beat Rubin  
Representative Office  
Schlossstrasse 24  
CH-8234 Stetten  
Switzerland

## Organization

FioTec was founded in 1994 in Switzerland and moved its Head Office to Thailand in 1997. The Company has acquired international experience in a broad range of engineering fields through the execution of projects in Germany, France, Switzerland, South Korea, USA and Thailand and managerial positions in Europe, Asia and Australia.

In order to enhance professionalism, we have established a strategic partnership with two renowned Swiss Companies:

### **PTM Engineering GmbH**

Mr. Peter Mueller, CEO Managing Director  
Strehlgasse 23 (Schulstrasse)  
CH-8704 Herrliberg  
Switzerland

### **Awatec AG**

Mr. Toni Zeller, CEO  
Toedistrasse 49  
CH-8810 Horgen  
Switzerland

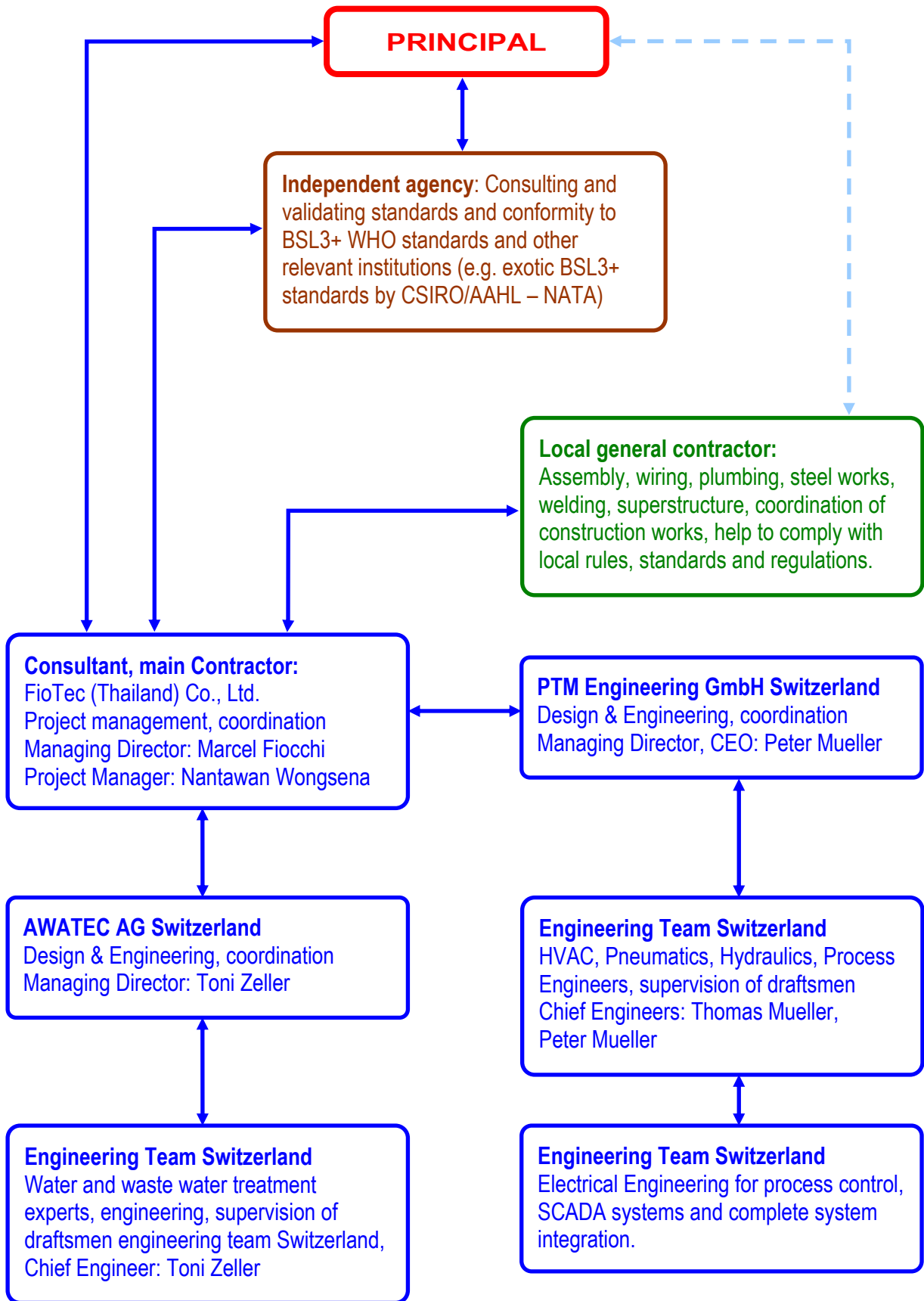
## Membership

- **Swiss-Thai Chamber of Commerce, Thailand (SwTCC)**
- **German-Thai Chamber of Commerce, Thailand (GTCC)**
- **Environmental Engineering Association of Thailand (EEAT)**
- **OSEC, Switzerland**

**SwissThai**  
CHAMBER OF COMMERCE



## Company structure and project organization chart



# SCOPE OF ACTIVITIES

FioTec (Thailand) Co., Ltd.  
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As a process engineering company our core business is based on the two media: “Air” and “Water”.

FioTec can offer standard solutions for almost any application or customized solutions for individual requirements and tasks in numerous sectors within our scope of activities. We carefully analyze the needs of our customers, provide professional advice, design, engineering and assembling as well as commissioning of the plant, project or systems on customers site. These include our service sector that also is an important part of our activities. Service means to us offering advice and support, evaluating new technologies, upgrading existing plants or systems, maintenance, supplying of spare parts.

FioTec has an extremely high productive management system to respond to the fact that technological innovation has advanced on all fronts, standards set by UN-Organizations or national Governments are becoming tougher and demands continue to become more sophisticated and diverse. Therefore, the business philosophy of FioTec is to cooperate very close with our two Swiss partners by pooling their accumulated knowledge and experience and use it for the benefit of each customer. The essence of this kind of business organization results in lean management and state-of-the-art technology to affordable prices and easier communication.

## Air – PTM Engineering GmbH, Switzerland

- **Fully automatic biosafety laboratories up to the level BSL4**
  - Redundant air handling system for bio safety laboratories
  - Networked control systems for all laboratory functions
  - Alarming system, supervision system for laboratories
  - System integration (BSC's, Autoclave, Air locks, UV-box, Dunk Tank...)
  - Process visualization systems (SCADA)
- **Incinerators**
  - Thermal after burners
  - Thermal reactors (thermal oxidizers)
  - Customized incinerators
- **Solvent Recovery plants**
  - Adsorption / Desorption by steam or nitrogen
  - Absorption / Desorption by absorption oil – new technology
  - Direct condensation with inert gas dryers
  - Customized solvent recovery plants for various industries
- **Process engineering services / consulting**
  - Improve efficiency of existing processes
  - Feasibility studies, system design
  - Upgrade of existing plants, modernization (process, control system)
  - Industries: Chemical, Petrochemical, Paper, others

## Water – Awatec AG, Switzerland

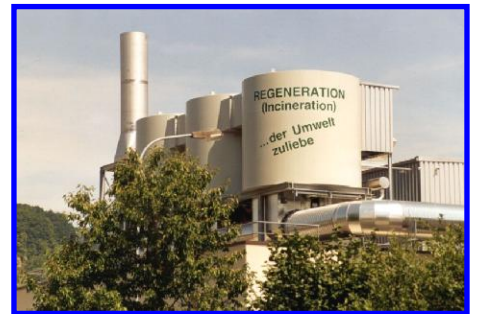
- **Customized water and waste water treatment plants design, consulting and turn key supplier**
  - Redundant water and wastewater treatment plants for bio safety laboratories, for Pharmaceuticals Industries other industries
  - Networked control systems for water and waste water treatment plants
  - Alarming system, supervision system for water and waste water treatment plants
  - Process visualization systems (SCADA)
- **Chemical / Physical waste water treatment plants**
  - Precipitation plants
- **Biological waste water treatment plants**
- **Water recycling plants**
  - Reverse Osmosis plants
  - Ultra filtration plants

## Process Engineering

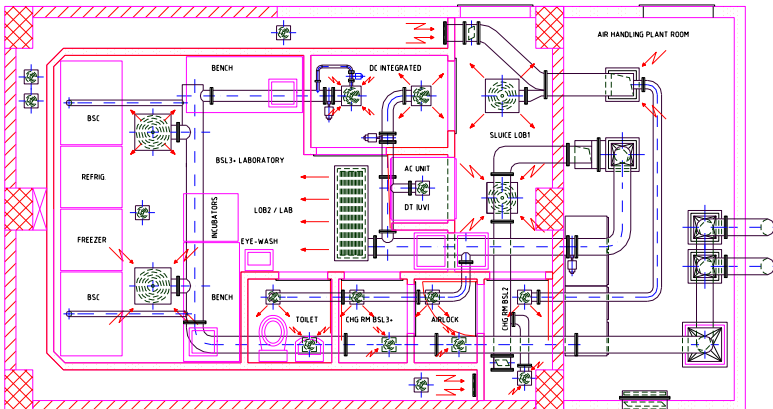
Consulting, Engineering, Turnkey projects or upgrading of existing plants and facilities

### Scope of works:

- Tender document preparation (URS, TOR)
- Feasibility studies, Engineering services
- Construction and construction supervision
- Co-ordination of local contractors and suppliers
- Training and maintenance
- Commissioning, accreditation, certification



Incinerator: Thermal Reactor



Layout, Engineering



BSL3+ and BSL4 laboratories:  
Process Engineering, AHU system, including detail engineering, turn key plants.



Controller system



Adsorption / Desorption SRS

### Design, engineering and integration of:

- Air handling systems, HVAC
- Electrical systems
- Controller systems
- Waste water treatment systems
- Incinerator systems
- Customized process engineering
- Upgrading of existing facilities
- Equipment integration
- Solvent Recovery systems

# References

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Customer : Clean and Science Co., Ltd.  
Country : South-Korea  
Contact : Mr. Kwak  
Phone : +82 681 535 7881  
Delivery : 2004  
Project amount : EUR 280,000.00 plus expenses



In 1994, PTM Engineering / FioTec delivered a turnkey system consisting of: Dryers, Air handling systems, Solvent recovery plant and Process control system to this South Korean Customer.

The Customer was able to achieve a return on investment in only 1 ½ years after start of operation.

An increase in production capacity was planned, and therefore, new dryers and a new, bigger solvent recovery plant was planned. The Customer asked PTM / FioTec to perform a complete pre-project consulting, consisting of an URS, layouts and technical drawings.

The Customer later decided to build the next stage of the project locally, and hired PTM / FioTec for the project management and supervision on a T&M (time & material) plus actual expenses and per diem allowance basis that was offered separately.

Project consultants:

- Mr. Peter Mueller
- Mr. Thomas Mueller
- Mr. Marcel Fiocchi



## References

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Customer : Department of Livestock Development  
Ministry of Agriculture and Cooperatives  
Country : Thailand  
Contact : Mrs. Wantanee Kalpravidh  
Phone : +66 2 653 4444  
Delivery : 2003



Consulting, Engineering, manufacturing, commissioning and training of an international standard BSL3+ (enhanced) laboratory in Pakchong, Korat, Thailand. OIE Paris, IAEA Vienna and AAHL/CSIRO Australia have validated this laboratory.

Project consultants:

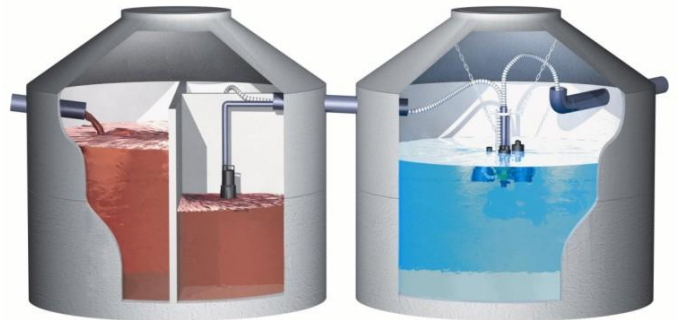
- Mr. Peter Mueller
- Mr. Thomas Mueller
- Mr. Toni Zeller
- Mr. Walter Wanner
- Mr. Marcel Fiocchi

## Industrial and residential wastewater treatment solutions

Engineering, manufacturing, installation, commissioning and maintenance of chemical / physical and biological wastewater treatment plants

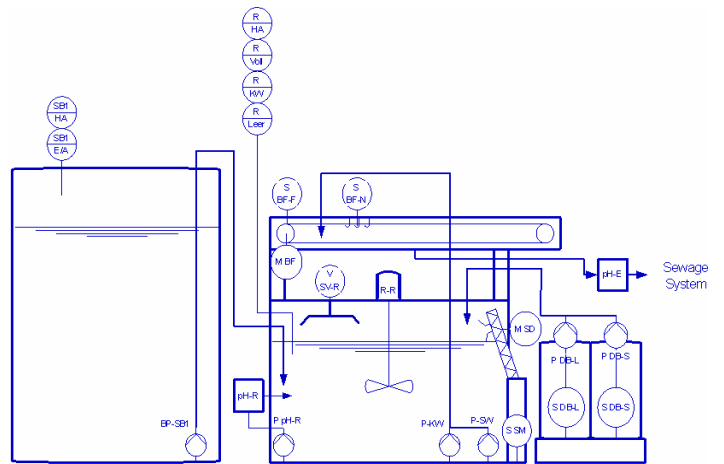
Biological wastewater treatment plants:  
Fully automatic process, low energy consumption

- From 2 up to 8,000 PE
- BSL3+ and BSL4 laboratories (special design conditions applied)
- Hotels, guesthouses, restaurants
- Various Chemical Industries
- Hospitals, apartment buildings
- Breweries, food & beverage production
- Slaughter houses and other industries



Chemical / physical wastewater treatment plants:  
Fully automatic process, easy to operate

- Capacity: 0.2 m<sup>3</sup> up to 1000 m<sup>3</sup> per day
- Metalworking industry
- Paint manufacturers, painters
- Oil emulsions from cleaning process
- Glass manufacturers / converters
- Gas stations, carwash, garage
- Chemical and many other industries



CSA 4000-1

### Membrane Technology: Micro-, Ultra filtration



- recycling of degreasing and washing solutions
- separation of oil/water emulsions
- recovery of paint dispersions
- treatment of photo-resist wastes
- purification of saline cheese bathing solutions from microbial contamination

### Membrane Technology: Reverse Osmosis



- rinsing, process water recycling
- concentration of heavy / precious metal salts
- process water preparation
- concentration of fruit and vegetable juice
- concentration of raisin juice
- concentration of whey
- desalination of sea and well water (Europe, USA, Middle East countries only)

### Ion exchange "DI water":



- recycling of rinsing water in electroplating
- restoration of process-bath solutions
- final removal of heavy metal traces
- recovery of precious substances
- removal of iron from electrolytic baths
- recovery of acids by retardation
- drinking on process water preparation
- DI water supply for laboratories