# **CURRICULUM VITAE**





Sakti Azhar Siregar Griya Bukit Mas II , Block C6 No. 3 Jl. Bojong Koneng - Bandung – 40191 - Jawa Barat, Indonesia



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30 Years experienced on WWTP, WTP, Renewable Energy and Process Equipment Design & Fabrication Organization :



Vice chairman on ABgI ( Asosiasi Biogas Indonesia ) 2020



Expert and Supervisory Board on IdWA http://www.idwa.or.id/profil/

# **Employment Report**:

## **Employment**

Period : May 2011 – CurrentEmployer : Independent Consultant

- Assestment for WWTP Paper Factory, Kediri, East Java, 2020
- Design for UASB system, Sukabumi, 2020
- Design for Activated Sludge System for Palm Oil Mill Effluent with cap 3 MW, 2020
- Developing PID, Tech Selection, etc for Produced Water Treatment & Injection, Palembang, 2020
- Bioenergy Power Purchase Agreament Review GIZ, 2020
- BioCNG Market Study for Central and East Kalimantan< GGGI EBTKE, 2019
- TKDN Team for Biogas and Biomas Power Plant GIZ EBTKE, 2019
- Technical Consultant for Re Start Up 3 Biogas Power Plant EBTKE GIZ, 2019
- Detail design for sludge sweeper mechanism and fabrication, 4 x 7x45 m, 2019
- Safety Guidline for Pome Biogas Power Plant GIZ EBTKE, 2018
- Process and Equipment Design, Corrugated Plate Interceptor 20 m3/hour, PLN Kalimatan, 2018
- Process and Equipment Design, Corrugated Plate Interceptor 10 m3/hour, PLN Aceh, 2018
- Process and Equipment Design, Dissolved Air Flotation 100 m3/hour, Jatim, 2018
- Training on Pome biogas power plant, Rantau Sakti Riau EBTKE, 2018
- Feasibility Study, 2.2 MW Pome Biogas Power Plant, Jambi. 2017
- Design review, Klaten Biogas Plant, 2017
- Biogas POME Benchmarking EBTKE GIZ Germany April 2016 October 2017
- Biogas / Biomass Impact Study EBTKE GIZ Germany -2017
- Review Water Injection Plant, Produced Water Treatment, ITB Pertamina, Palembang 2017
- Basic Design, Produced Water Treatment, ITB\_ Pertamina, Kalimantan 2017
- UASB 3 Phase separator Dairy Industry 2017
- Design Evaluation and Retrofitting Vinasse WWTP and UASB Fabrication and UASB 3 Phase Separator, East Java 2015.
- Data Collection, sampling, stakeholder meeting for 6 palm oil mill under PTPN 5, Riaus, Indonesia
- Feasibility study biogas to energy, 90 T/hour pome Makin Group.
- Biogas WWTP Process Equipment consultant, OleoChemical Sumatera.
- EPA Task on Biogas generated from municipal WWTP. Tetratek USA
- Design and Fabrication Dissolved Air Flotation, 50 m3/h.
- Design and Fabrication 3 phase separator for UASB, chemical company. 2016

Feb 2014 - Feb 2016



#### Responsibility:

- 1. to do all tasks and duties for the Company interest and requirement which may be amended by the Company or your Supervisor from time to time.
- 2. After sales support for the existing project base in Indonesia
- 3. New business development for the presence of Aqua in Indonesia
- 4. Bidding preparation for new project
- 5. Supporting the on going project in coordination with Intenational project manager

May 2008 - Feb 2011



PT. AES AgriVerde Indonesia(AES Climate Solution) Senior Engineer-Waste Water Treatment (SME). South East Asia

#### Responsibility:

For 9 pome biogas site in Indonesia and several site in Malaysia

- 1. Plan and implement oil / toxic component management
- 2. Spearheading forced outage projects related to process problems; define method and work with OMM to revive the sites
- 3. Define methods to improve normal operational site performance
- 4. Validate process related engineering solutions proposed by engineering function (e.g. If process improvement takes place, then need to estimate increase in biogas so that engineering & construction can device adequate infrastructure needed)
- 5. In charge of operational and regulatory sampling
- 6. Manage sampling logistics (internal material required, send to lab etc)
- 7. Evaluate sampling results, indicate abnomaly that could be problem
- 8. Give update on weekly and monthly basis to CM on forced outage process tracking efforts and normal operational sites
- 9. Liase with OMM manager to have site engineers take samples at given frequency and sampling points
- 10. Liase with regulatory and BD manager to determine PKO for new projects and sampling points for PDD entering validation

Reporting to Global Engineering Director based in Singapore and S&T Manager based in Melbourne – USA May 2006 - May 2008 PT. Siemens Indonesia - Water

SIEMENS

**Technologies** Sector Water Manager

#### Responsibility:

- 1. To develop and maintain a business within Metal, Mining, Pulp and Paper, Chemical, Oil and Gas Sector through regional office in Medan, Balikpapan, Surabaya and Jakarta. 1.) set targets, strategies and budgets, 2.) Technical support where required, training of sector sales personnel, co ordination customers visit and presentation, introduction of new products/ system to major regional customers.
- 2. Technology include on the BD activities: Odor and Control Group (OC), CheemFeed Group (CF&D), BioClar Group (BC), Engineered Product and System Group (EP&S), Purified Water Group (PW)
- Develop and co ordinate partners activities with existing and new distributor and agents

Reporting to A&C Director of PT. Siemens Indonesia. About 15 sectir sales personnel working/reporting to me.

Period : September 2005- May 2006

noideog

**Employer** Doshion (now Doshion Veolia Water)

> Sales and Marketing Manager : August 2004 - September 2005

• Period

NOT FOR TENDER PURPOSED

Self Employee

: Working as WWTP & WTP Consultant

Period

: March 1999 - August 2004

Employer

: International Business Network Pty. Ltd. With clients are as

follows:

Indonesian Business Dev.

Manager for PT. Pensa (BP Solar Agent) and Ace Toolmakers Pty.

Ltd

Indonesian Business Dev. Manager for IDS Enterprise

System Pty Ltd.

Supply Chain Management/ ERP

Company

Indonesian Marketing Manager Water Treatment Company



Indonesia Representative
Water Resources Company



Indonesia Representative Marketing Engineer Mining & Industry Process Automation Company



Oct. 1997 - Oct. 1998



Indonesia Representative - Process/ Sales Engineer

Nov. 1994 - Oct 1997



PT. Lurgi Bamag – JJE Senior Process Engineering

: Nov. 1990 - Sep 1994



PT. Envitech Perkasa / Head of Process Department

## Qualification

- Chemical Engineer Graduated from Polytechnic Institute Technology of Bandung, Indonesia, 1990
- Process design, commissioning WTP and WWTP and Biogas Generator and Power Plant
- Engineering WTP and WWTP Equipment and Biogas Generator and Power Plant
- Business development for difference industries/ product; control system, WTP & WWTP equipment ( aerator, BFP, etc.), software, sugar plant, etc
- CDM Biogas Anaerobic Process
- Market review and market penetration for specific technology

#### Professional Training/Seminar

- Comparison Study, Central Wastewater Treatment, Renewable Energy, Germany, 2016
- Safety Training, Bureau Veritas, Singapore, April 2010
- First Aider Training, SOS, Jakarta, October 2008
- Product Training for Memcor \*Continuous Micro Filtration for Drinking Water , Singapore, September 2006
- Product Training for Memtek Continuous Micro Filtration for Heavy Metal Removal, Singapore, July 2006
- Product Training for Project Ferret the Health Information System, Sydney, Australia, June, 2003
- Products and Sales Training for IDSe42 Supply Chain Management System, Sydney, Australia, November 2002.
- Technical and Sales Training for HICLEAR package STP, Brisbane, May 2001
- Sales Training for Baker Process Equipment, Singapore, July 1998
- Sales Training for E-Cat (Ultra High Capacity Thickener), EIMCO<sup>®</sup>, Singapore, February 1998
- Training of Sales Productivity Programme, Mercury International, Singapore, March 1998
- Sales Training for AIS ( Advent Integral System ) Deep Tank Aeration System, EIMCO<sup>®</sup>, Singapore, November 1997
- Training Licence for Upflow Anaerobic Sludge Blanket Process (UASB) from PAQUES<sup>®</sup>, Balk, Netherlands, August.
   1996 http://www.paques.nl
- Training Program on Pollution Prevention, ASEAN Environmental Improvement Project Dana Mitra Lingkungan, Jakarta, June 1994
- Treatment of Hospital Waste, LPUI-RSCM, Jakarta, Indonesia, Sep 1993
- Comparison Study, Central Wastewater Treatment, Yorkshire Water, England, 1992

- Training Licence for Upflow Anaerobic Sludge Blanket Process (UASB) from BIOTHANE , Delft, Netherlands, Oct.
   1992 http://www.biothane.com
- Industrial Waste Water Treatment, ALTUB-GTZ, Bandung, Nov 1991
- Intensive workshop for Industrial WWTP, GTZ-DZWA, Pelabuhan Ratu, Indonesia Sep 1991

#### **Trainer / others**

- Trainer for Pome Biogas Power Palnt, Tanah Laut, Tanah Grogot and Lamandau each 1 MW cap. GIZ-EBTKE, Aug 2019
- Training on Pome biogas power plant, Rantau Sakti Riau EBTKE, 2018
- Presenter, Indonesian Water Association, Yogja, 2016
- Presentation on GIZ Germany business chamber on Agriculture Renewable Energy, Berlin , July 2015
- Inspector and advisor for several WWTP for Industries around Tapak River, Semarang, Bapedal, September 1992
- Seminar on Wastewater Treatment Plant using UASB, Lampung, PT Envitech Perkasa, August 1993
- Instructor for Wastewater Treatment Technology for Pulp and Paper, Grand Hotel Lembang Bandung, Bapedal, 13 17 June 1993
- In House Training of Wastewater Treatment Plant, Jakarta, PT Cakrawala, 1995
- Instructor for Training of Wastewater Treatment Technology for the Implementation of ISO 14000, Hotel Sukajadi Bandung, LAPI ITB and SUCOFINDO, 5 – 22 April 1999
- Presenter for "Effluent Treatment for Metal Finishing Industries", Pusat Pengembangan Politeknik dan Pendidikan Program Diploma, Bandung, 5 July 2002

## **Publishing Book**

- Instalasi Pengolahan Air Limbah, ISBN 979-21-0840-8, Sakti A. Siregar, Penerbit Kanisius, 2005
- Safety Guideline for Palm Oil Mill Effluent Biogas Power Plant, 2018
- Sewage Treatment Plant, 2006, under review.
- Anaerobic Treatment, 2006, under review.

#### Language

Indonesian, English, Java and Sunda (pasif)

#### Capabilities on Water & Wastewater Treatment Project

- Visiting the client for :
  - introduce the company activity
  - collect the technical and commercial data required to prepare a proposal
- technical clarification meeting
- follow up the project
- · treatability test for physical and chemical treatment
- Prepare the proposal with the results of :
  - process design
  - sizing of the equipment
  - estimation
  - clarification with the equipment supplier ayout
- Project implementation with the activities of :
- clarification meeting with the client and subcontractors
- single line piping diagram
- equipment layout
- Start up and Training
- prepare the commissioning schedule
- supervision for dry and wet trial
- supervision for start up the plant

- process description
- operating cost
- schedule
- complete book of proposal
- block flow diagram
- equipment & instrumentation list
- general arrangement of tank
- hydraulic profile
- prepare the operating and maintenance manual
- training the factory staff
- laboratory test for physical and chemical treatment

# **Process & Equipment Know-how:**

- Anaerobic Treatment UASB Fix Bed
- Sequencing Batch Reactor
- Activated Sludge
- Sludge Dewatering Filter Press & BFP selection
- Assisting Moving Bed
- Physical treatment
- Chemical treatment
- Moving Bed Bio Reactor

- Dissolved Air Flotation Design & Manufacture
- Sand Filter Design & Manufacture
- Ion Exchanger Design & Manufacture
- Oil Separator Design & Manufacture
- Package STP Design & Manufacture
- Package WTP Design & Manufacture
- Pumps & Piping

#### **JOB EXPERIENCES:**

#### **Sugar Plant**

- 1. Kedawoeng Sugar Factory, East Java, Indonesia, 1999
  Sugar Refinery Technical Clarification, managed bid preparation etc. SUDECO, England.
- 11 Sugar Factories of PTPN XI, East Java, Indonesia, 2000
   Process Automation Control, Site visit for identified PAC requirement on system and equipment. MIPAC, Australia.

#### **Solid Waste**

- 1. Caltex, Duri, 1994
  - Site visit with CH2MHILL for problem identification and possible treatment of Slop Oil
- Copper Slag Management, 2002
   Documentation evaluation of Copper Slag from PT. Smelting after study done by PT. Padmanaba Surabaya.
   Copper Slag is stated as Hazardous waste in fact it can be used for blasting, ready mix concrete.

# **Study or Evaluation**

- 1. Cisirung Wastewater Treatment Plant, Bandung, Indonesia, 2000. Evalution of process and equipment performance. SUCOFINDO, Bandung
- Cakung Slaughter House, Jakarta, 2001
   Tender Evaluation, technology/process selection, estimation and proposal preparation for Pentaprima Hutama Mandiri, PT
- 3. WTP Rawa Lumbu and RawaTembaga , PDAM Bekasi. Bekasi, Indonesia, 2002.

  Technical Evaluation of existing WTP, recalculation for increasing capacity. Suaka Tirta, PT, Jakarta
- 4 Berau Coal. Berau, Kalimantan, Indonesia, 2006.
  - Technical Evaluation of existing WTP, Sprint Consultant.
- 5 Karang Pilang 2000 lps, 2008
- 6 Bekasi WTP 4000 lps, as team on Beta Pramesti
- 7. Etc

# **Effluent Treatment Plant**

o around 40 wastewater treatment plant have been designed, installed, commissioned and supervised.

| 1. | Project                  | PT. Prembotling, Bogor Indonesia  |
|----|--------------------------|---|
|    | Type of industry/product | Tea bottling  |
|    | Type of treatments       | Extended aeration   |
|    | Description of duties    | Sizing of fabrication equipment, training of factory staff and commissioning of the plant.          |
| 2. | Project                  | PT. Texmaco Jaya, Karawang Indonesia  |
|    | Type of industry/product | Textile   |
| ı  | Type of treatments       | Aetated lagoon  |
|    | Description of duties    | Training of factory staff and commissioning of the plant  |
| 3. | Project                  | PT. Aneka Pangan Dwitama, Cikampek Ind.   |
| -  | Type of industry/product | Sauce and ketchup   |
|    | Type of treatments       | Physical & chemical, extended aeration, BFP   |
|    | Description of duties    | Process design and engineering, training of factory staff and commissioning of the plant            |
| 4. | Project                  | PT. Unilever Indonesia, Cikarang Indonesia  |
|    | Type of industry/product | Ice cream   |
|    | Type of treatments       | Physical & chemical, high rate AS, BFP  |
|    | Description of duties    | Process design and engineering, training of factory staff and commissioning of the plant.           |
| 5. | Project                  | PT. Trebor Indonesia, Jakarta Indonesia   |
|    | Type of industry/product | Candy   |
|    | Type of treatments       | Physical & chemical, AS, Act. carbon  |
|    | Description of duties    | Process design and engineering  |
| 6. | Project                  | PT. Cilegon Multi Wahana Service, Cilegon Indonesia.  |
|    | Type of industry/product | Polyacrilic fibre   |
|    | Type of treatments       | Physical & chemical, 2 stage AS,BFP   |
|    | Description of duties    | Process design and engineering and training of factory staff  |
| 7. | Project                  | PT. Bekasi Indah Industrial Estate, Cikarang Indonesia  |
|    | Type of industry/product | Industrial estate   |
|    | Type of treatments       | Physical & chemical, 2 stage AS   |
|    | Description of duties    | Process design and engineering  |
| 8. | Project                  | Design of Centralised WWTP for Tapioca Starch Effluent (BAPEDAL), Pati , Central of Jawa, Indonesia |
|    | Type of industry/product | Tapioca starch  |

| ĺ        | Type of treatments                           | Physical & chemical, UASB, AS   |
|----------|--|---|
|          | Description of duties                        | Sampling, process design, preparation of document tender  |
| 9.       | Project                                      | PT. Pupuk Sriwijaya, Palembang , South Sumatera, Indonesia  |
|          | Type of industry/product                     | Fertiliser  |
|          | Type of treatments                           | Corrugated Plate Separator  |
|          | Description of duties                        | Sales, clarification and check of oil separation equipment  |
| 10.      | Project                                      | PT. Sanmaru Ancol, Jakarta Indonesia Noodles  |
|          | Type of industry/product Type of treatments  | Physical & chemical, extended aeration  |
|          | Description of duties                        | Sales, Process design and engineering, commissioning and training of factory staff                |
| 11.      | Project                                      | PT. Jaya Kertas, Mojokerto, East Jawa, Indonesia  |
|          | Type of industry/product                     | Paper   |
|          | Type of treatments                           | Physical & chemical, extended aeration, BFP   |
|          | Description of duties                        | Process design of WWTP  |
| 12.      | Project                                      | PT. Eureka Aba, Mojosari, East Jawa, Indonesia  |
|          | Type of industry/product Type of treatments  | Pulp and Paper Physical & chemical treatment  |
|          | Description of duties                        | Sales, Site evaluation and process design for pretreatment and UASB of WWTP                       |
| 13.      | Project                                      | PT. Coca Cola Bottling Co., Jakarta, Indonesia  |
|          | Type of industry/product                     | Coca cola   |
|          | Type of treatments                           | Sequencing Batch Reactor  |
|          | Description of duties                        | Determination the problems of existing ICEAS WWTP and make a planning for re commissioning of the |
|          |  | plant   |
| 14.      | Project Type of industry/product             | PT. Gold Star Astra, Cikupa -Tangerang, Indonesia   |
|          | Type of industry/product Type of treatments  | Plating pH adjustment, precipitation, sludge treatment  |
|          | Description of duties                        | Process design of WWTP  |
| 15.      | Project                                      | PT. Pembangunan Jaya ( Putri Duyung Cottage ), Jakarta Indonesia                                  |
|          | Type of industry/product                     | Sewage  |
|          | Type of treatments                           | Extended Aeration   |
|          | Description of duties                        | Determination the problems of existing STP and make a planning for recommissioning of the plant.  |
| 1.0      |  | Designing Corrugated Plate Interceptor  |
| 16.      | Project Type of industry/product             | PT. Garuda Metal, Tangerang Indonesia Plating   |
|          | Type of treatments                           | pH adjustment, precipitation  |
|          | Description of duties                        | Process design of WWTP  |
| 17.      | Project                                      | KMI Methanol, Bontang, East Kalimantan, Indonesia   |
|          | Type of industry/product                     | Methanol  |
|          | Type of treatments                           | Cricket Filter, Cation, Degasifier and Mixed Bed  |
|          | Description of duties                        | Estimation of Water Treatment Plant   |
| 18.      | Project Type of industry/product             | JJ - Hartmann, Malaysia Paper   |
|          | Type of treatments                           | Physical & chemical, SBR, FP  |
|          | Description of duties                        | Checking, Estimation, Supervise the installation and commissioning of SBR WWTP                    |
| 19.      | Project                                      | PT. Century Textile   |
|          | Type of industry/product                     | Textile   |
|          | Type of treatments                           | Anaerobic Treatment   |
| •        | Description of duties                        | Process Design, Estimation and Instruction Manual Preparation                                     |
| 20.      | Project                                      | PT. Sarimorawa  |
|          | Type of industry/product  Type of treatments | Pulp and Paper  Physical Chemical and Activated Studio  |
| <b>-</b> | Description of duties                        | Physical, Chemical and Activated Sludge  Process Design and Estimation                            |
| 21.      | Project                                      | Petrochemical Plant, Kuantan, Malaysia  |
|          | Type of industry/product                     | Polymer Polymer   |
|          | Type of treatments                           | Physical & chemical, Fixed Bed Anaerobic Reactor, BFP   |
|          | Description of duties                        | Checking and Estimation of anaerobic WWTP Treatment Plant. Design for                             |
|          |  | Anaerobic Reactor   |
| 22       | Project                                      | Sucofindo Laboratory, Surabaya, Indonesia   |
|          | Type of industry/product                     | General Laboratory  |
|          | Type of treatments                           | Physical & chemical, Sludge Treatment   |
| **       | Description of duties                        | Process Design, Tendering, Supervision and Training + Commissioning                               |
| 23       | Project                                      | Pelangi Era Dua Satu, Tangerang, Indonesia  |
|          | Type of industry/product                     | Textile  Physical 8 chamical AS ED  |
|          | Type of treatments  Description of duties    | Physical & chemical, AS, FP  Process Design, Tendering, Supervision and Training + Commissioning  |
| 24       | Project                                      | Sing Long Brothers  |
|          | Type of industry/product                     | Textile   |
|          | Type of treatments                           | Physical & chemical, AS, FP   |
|          | Description of duties                        | Process Design, Tendering, Supervision and Training + Commissioning                               |
| 25       | Project                                      | Trans Pacific Petrochemical Indotama  |
|          | Type of industry/product                     | Petrochemical   |
|          | Type of treatments                           | O/W Separator, DAF, AS, BFP   |
|          | Description of duties                        | Installation Supervision and Evaluation of existing design, Pre commissioning activities          |
| 26       | Project                                      | 9 Sites , Palm Oil Mill Effluent  |
|          | Type of industry/product                     | Palm oil mill   |
|          | Type of treatments                           | O/W Separator, anaerobic lagoon   |
|          | Description of duties                        | Evaluation of existing design and monitoring, etc.  |

#### **Business Development Activity**

Have experienced in the last 7 years on business development for several services and engineering product from difference country such as :

- Equipment for water, wastewater treatment plant, flue gas de sulphurization, recausticizing for Municipal, Power, Mining, Pulp & Paper Industry from USA
- Water Management Design from Australia
- Sugar Processes and Plant from UK
- Health Information System from Australia
- Process & Automation Control System for Mining and Industry from Australia
- Package water treatment system from Australia
- Automotive Distribution System from Australia
- Solar Power System from Australia

## **CDM PROJECT**

POME anaerobic digester under CDM project scheme: 9 sites in Indonesia

Methodology AMS IIIH v 5-9 Methane recovery in wastewater treatment:

#1 PT. Permata Hijau Sawit http://cdm.unfccc.int/UserManagement/FileStorage/SKRD2ZTU51HB96L780A0CGEQ3VPW4X

#3 PT. Tolan Tiga -Perlabian http://cdm.unfccc.int/UserManagement/FileStorage/WQ8D03S6UJPTVBHAO9G1YZECINFM5X

#4 PT. Bakrie Pasaman http://cdm.unfccc.int/UserManagement/FileStorage/E6QI0WD43SVR7FLKZ1BXUJOA985THC

#5 PT. Tolan Tiga - Bukit Maradja Palm Oil Mills

#6 PT. Sago Nauli http://cdm.unfccc.int/UserManagement/FileStorage/W0EZFVPT7RKM64SNXAYQ9J58CUB312

#7 PT. Sisirau http://cdm.unfccc.int/UserManagement/FileStorage/LKA6NJVEBX9U1437R2ZDFPI5CQOGY8

#8 PT Perkebunan Milano http://cdm.unfccc.int/UserManagement/FileStorage/S0TI1BJVFR4UACG37NZMPXK2HW89L6

#9 PT Victorindo Alam Lestari

#10 PTPN 5, six palm oil mill, CDM Assestment, etc - CAMCO

# **Current Activity 2019**

- Assisting for Re-Startup 3 (three) Biogas Power Plant - Kalimantan