

The background is a light blue gradient with several water droplets of various sizes scattered across it. The droplets have a realistic appearance with highlights and shadows, giving them a three-dimensional look. The text is centered in the middle of the slide.

Job Hunting & Working Experience in Japan

Bing Zheng SOH

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1. Self Introduction (About Myself)

- Name : Bing Zheng SOH
- Nationality : Malaysian
- Undergraduate : Bachelor's in Civil Engineering,
University of Technology Malaysia,
Jun 2010
- Postgraduate : Master's in Environmental Engineering,
Hokkaido University,
Sep 2013
- Current job : Civil Engineer at TOA Corporation,
since Oct 2013~

1. Self Introduction (Malaysia)



Petronas Twin Towers



Tallest building in the world (Year 1998 to Year 2004)

Tallest twin towers in the world (459.1m).

2. My Research Topic in University (Malaysia)

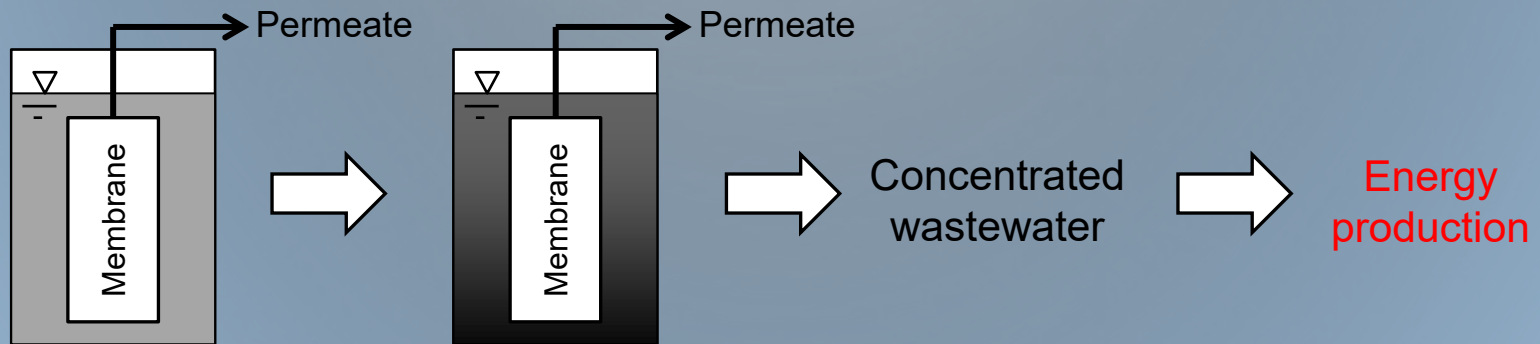
- Bachelor's in Civil Engineering, University of Technology Malaysia, Jun 2010.
- Thesis:
 - **Low Flow Analysis – A Comparison between Gumbel and Log Pearson Type III Methods.**
- Aim of low flow analysis:
 - To improve drought management in the future.
- 24 years low flow data for Mengalong River in Sipitang, Sabah, Malaysia was collected.
- Conclusion:
 - Log Pearson Type III Method can provide better prediction for this data.

2. My Research Topic in University (Japan 1 of 5)

- Master's in Environmental Engineering, Hokkaido University, Sep 2013.
- Research:
 - **Direct Membrane Filtration (DMF) with Chemically Enhanced Backwash (CEB) for the Recovery of Organic Matter from Domestic Wastewater**
- Laboratory on Engineering for Sustainable Sanitation, Division of Environmental Engineering, Graduate School of Engineering, Hokkaido University.
- Supervisor:
 - Assoc. Prof. Katsuki KIMURA (now Prof.)

2. My Research Topic in University (Japan 2 of 5)

- Wastewater contains internal chemical energy.
- Problem ⇒ Low concentration
- One idea ⇒ Direct membrane filtration (DMF) of raw wastewater to increase concentration.

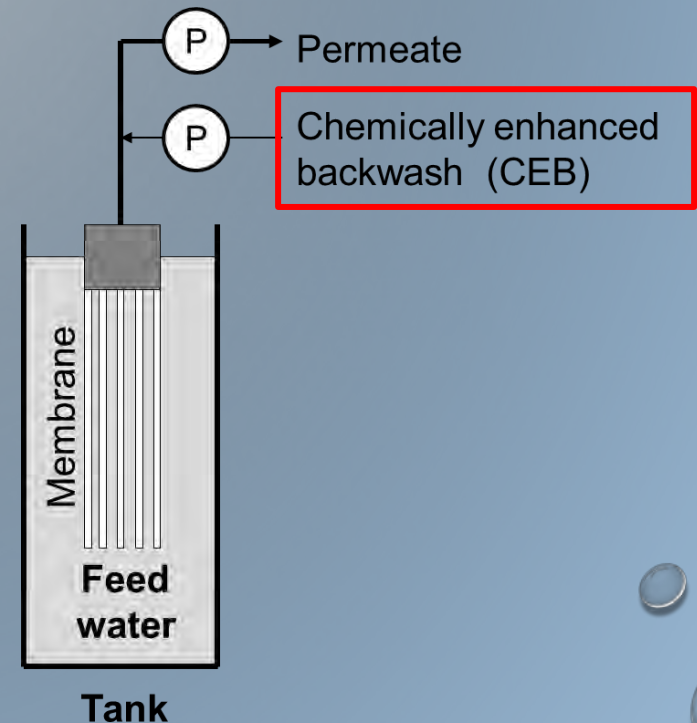


2. My Research Topic in University (Japan 3 of 5)

- Advantages of DMF
 - ✓ Simplicity in design and maintenance.
 - ✓ Concentrate wastewater.
 - ✓ Smaller footprint.

- Limitation of DMF
 - ❖ Membrane fouling

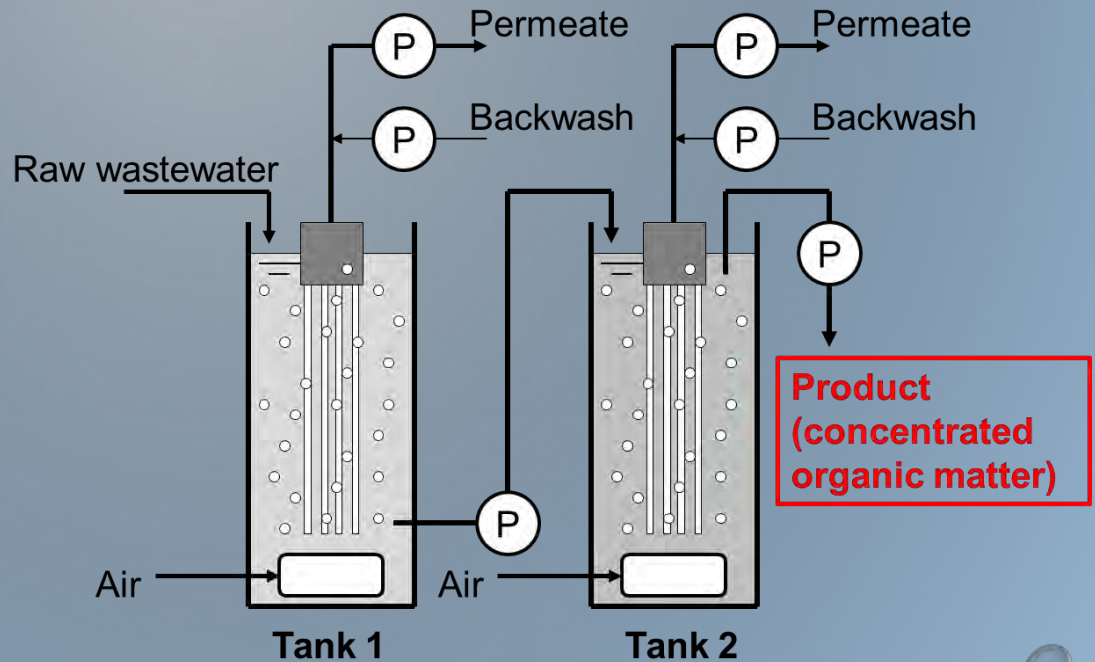
- To control membrane fouling
 - Chemically Enhanced Backwash (CEB) is used.



2. My Research Topic in University (Japan 4 of 5)

- The objectives:

1. The feasibility of DMF for organic carbon recovery from domestic wastewater.
2. The effectiveness of CEB to control membrane fouling.
3. The characterizations of foulants and understanding fouling mechanisms.



2. My Research Topic in University (Japan 5 of 5)

- Conclusions:

1. DMF can increase concentration of domestic wastewater.
2. CEB using NaOCl and citric acid were able to mitigate membrane fouling.
3. Total recovery of organic matter is > 70 %.
4. Selection of chemical reagents for CEB will affect recovery of organic matter.
5. The estimated potential energy is 0.23kWh from 1m³ of wastewater treated.

3. My Job-Hunting Experience in Japan (1 of 3)

- My job-hunting started 1 year before I graduated from Hokkaido University.
- Aim:
 - Water business related companies
 - Design or construction companies
 - Oil or plant engineering companies
- Attended seminars by companies.
- Submitted “Entry Sheet” to the companies.
 - ✓ Resume, qualifications, motivations to apply for the company, strength and weakness, research topic etc.

3. My Job-Hunting Experience in Japan (2 of 3)

- Summary of Job-Hunting

Description	No. of companies
Seminar	Approx. 30
Entry Sheet	Approx. 10
Interview/group discussion	3

- However, all was not successful.
- One main reason of failure was Japanese language.

3. My Job-Hunting Experience in Japan (3 of 3)

May 2013

- Coordinator of Engineering Program in Hokkaido University asked me about my plan after graduation.
- She introduced me to TOA Corporation.

Sep 2013

- Interview and Engineering Test at TOA Head Office.

Oct 2013

- Started work at TOA.

4. My Current Job (TOA Corporation 1 of 2)

Introduction to TOA Corporation

- General contractor construction company.
- Founded in 1908 by Soichiro Asano.
- The first landfill developer in Japan and famous for dredging and reclamation.
- Operations:
 - ✓ Marine civil engineering such as marine construction works (jetty, breakwater etc.) and reclamation works.
 - ✓ On-land civil engineering such as roads, bridges, tunnels etc.
 - ✓ Architectural building works such as factories, power plants etc.
 - ✓ Research and development such as soil improvement works, recycling of dredging material etc.

4. My Current Job (TOA Corporation 2 of 2)

Project Examples



Paiton Private Power Project in Indonesia



Suez Canal Dredging Work in Egypt

4. My Current Job (My Responsibilities 1 of 6)

From Oct 2013 to Oct 2018

- Worked at Overseas Design Group in Design Department, Head Office.
- Responsibilities:
 - ✓ Perform civil engineering design for marine facilities based on Japanese standards and/or International standards.
 - ✓ Perform computer-aided drawings.
 - ✓ Prepare quantity estimation.
 - ✓ Prepare design calculation sheet or report.
 - ✓ Provide long distance training for Philippines' office staff.

4. My Current Job (My Responsibilities 2 of 6)

From Nov 2018 ~

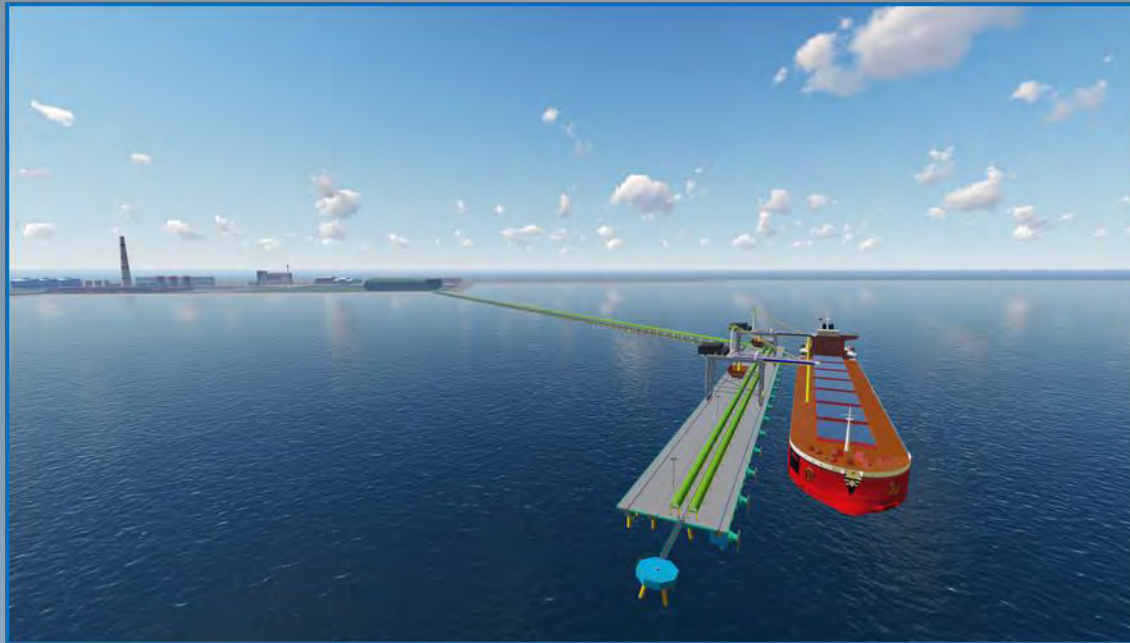
- Currently at Engineering Service Department, International General Headquarters.
- Responsibilities:
 - 1) Design support for bidding and tender.
 - 2) Design and technical support for construction site.

4. My Current Job (My Responsibilities 3 of 6)

1) Design Support for Bidding and Tender

- A new jetty is to be constructed and TOA participated in the bidding process.

Image of completed jetty

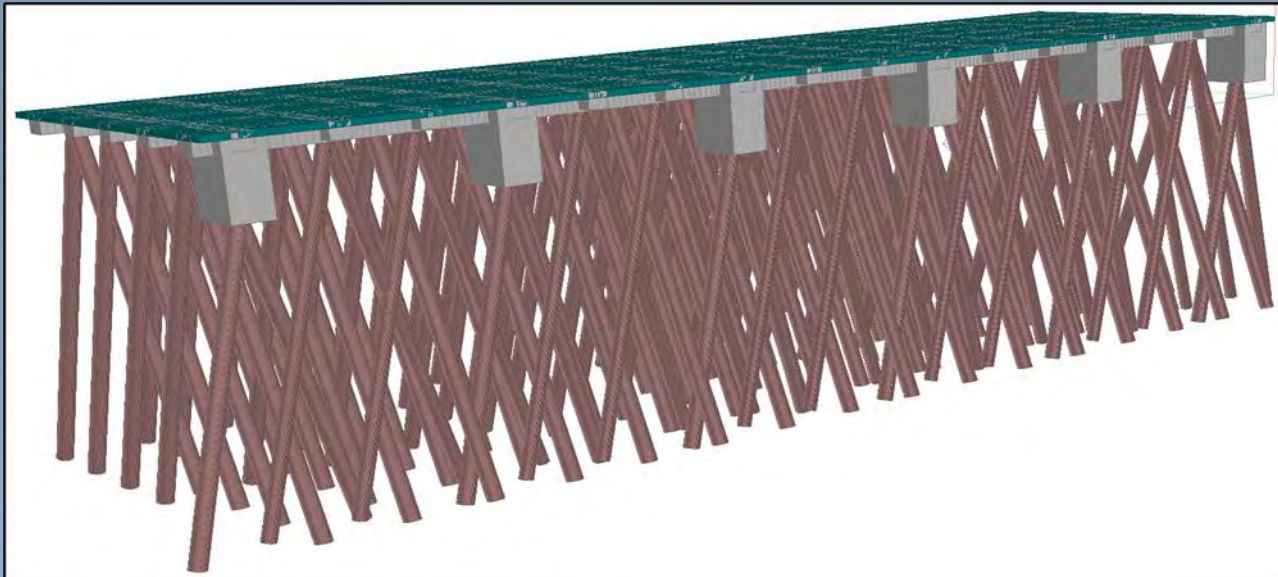


4. My Current Job (My Responsibilities 4 of 6)

1) Design Support for Bidding and Tender

- Based on natural conditions (soil, waves, seismic etc.) and loading conditions (vessel size etc.), the jetty was designed.
- The estimation team will use our design for cost estimation for the bidding.

3D Image of designed jetty

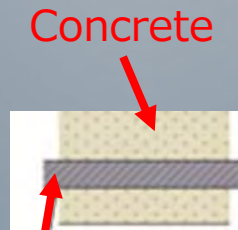


4. My Current Job (My Responsibilities 5 of 6)

2) Design and Technical Support for Construction Site.



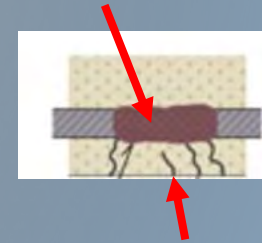
Cracking in
concrete
under jetty



Rebar

(1) Normal Concrete

Rust occurs



Water will penetrate
through the cracks.

(2) With Cracks



Concrete
will peel off

(3) Peel Off

4. My Current Job (My Responsibilities 6 of 6)

2) Design and Technical Support for Construction Site.

- The construction site requested for repair method.
- Discussion with TOA's Research and Development Centre, the repair method is to inject Epoxy Resin to prevent water from penetrating.



5. Advice to International Students

- Acquire the help of Japanese students.
- Increase your Japanese Language ability.
- Prepare to work long term in Japan.
- 郷に入っては郷に従え (ごうにいつてはごうにしたがえ);
☆When in Rome do as the Romans do.
- **Appreciate and enjoy Japan!!!**

The background is a solid light blue color. Scattered across the top and bottom edges are several water droplets of various sizes. The droplets are rendered with a soft, realistic effect, showing highlights and shadows that give them a three-dimensional appearance. The text is centered in the middle of the frame.

**Thank you for your
attention**