

JSCE Student Tour Grant 2009 Study Tour Report

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I am very grateful and happy that I had the opportunity to be one of the students to participate in the JSCE (Japan Society of Civil Engineers) 2009 Study Tour Grant. I was glad I had the chance to visit the advance cities of Japan and look at the latest projects and technology of Japan's civil engineering.

In the six days of our Tour we were accompanied by Mr. Yaganawa of JSCE Dr. Tsuyoshi of Kajima and many students of the TIT (Tokyo Institute of Technology).

The first day in Japan I arrived I had a chance to look around the streets of Tokyo.

Even though Tokyo is a very high populated city I was very happy to see a highly efficient urban public transportation system. The highly developed transportation systems truly makes Tokyo a very eco- friendly city.



JSCE head quarters Yotsuya Tokyo

In the morning we met Pro.Otsuki in JSCE head quarters. He shared with us his valuable experience of his career as being a civil engineer. He told us that we should be aware of all the dangers laying before us in our future career. He pointed out the differentials between cultures maybe a very critical manner when working overseas.

Pro.Otsuki also shared with us his ambitious dream of a floating island. An island which is capable of avoiding dangerous typhoons. An island which can serve as a major international seaport or airport. Pro.Otsuki claimed that this idea came to his mind after reading a Japanese comic book. He told us it is his life dream to make this child fantasy into a living reality. I have learned from his dream that being creative and ambitious is a very key factor of being an engineer. And we young engineers should keep on with this kind of spirit.

PWRI (Public Works Research Institute) Tsukuba city

In the afternoon we were guided by Mr. Lee from TIT, and went to Tsukuba to visit PWRI. The facility is truly large and its research cover many fields. We were first introduced to the development of IFAS (Integrated Flood Analysis System) and its applications. The system shows how Japan is helping other Countries by using it's advance technologies. Providing an early warning for countries which are incapable of getting this kind of information.

The Pavement testing facility was one of the numerous large testing facilities we saw in PWRI. The testing techniques, technology and testing methods used to create the model are very new to me. The visit to PWRI was very impressive to me. It gave me better understanding of the different kinds of pavement used in Japan.

Kajima Technical Research Institute

In this facility we saw many testing facilities such as the Wind tunnel. I believe that Japan suffers from typhoons as well as Taiwan. So whenever there is a skyscraper prepared to be built it is essential to conduct a series of wind tunnel tests to evaluate of the wind to the tall buildings and even to the surrounding buildings. We also saw the wave maker facility made to evaluate the effect of waves to underwater structures. Mr. Ikeya even let us see it in motion. And told us why the old models are not as accurate as the new ones. Throughout the research facility we also some energy saving technology such as the new air ventilation system used in the offices in Kajima. Proving energy saving techniques is a very popular topic especially nowadays.



Obayashi Corporation

My first impression of arriving at Obayashi was it was a very beautiful office building. There were parks surrounding the building, bridges were connecting buildings everything was bright and clean. I absolutely very liked the way it was design. The park was perfectly a getaway place for the office workers inside the buildings.

Inside the headquarters of Obayashi we met Mr. Kawauchi. Mr. Kawauchi gave a brief understanding of the many projects Obayashi was constructing worldwide. Showing us the special advantage of its corporation because of their expertise in tunneling.

Mr. Kawauchi shared with us many case studies of their previous works of the Hoover dam in Nevada USA and their new tunneling techniques of shallow tunneling. I realized that many of the tunnels in Taiwan were constructed by Obayashi. And wish to learn more of their special

tunneling technique in the future.

Trip to Kobe

We took the famous Shinkansen for the trip to Kobe. The trip was quite comforting and fast. This new kind of rail system was introduced to our country and was finished recently. The train we took could provide wireless internet connection which was fascinating for me. Because in Taiwan we don't have such kind of service yet.

Akashi-Kaikyo Bridge

We visited the Akashi-Kaikyo Bridge the world's longest suspension bridge. The museum next to it gave a better understanding of how it was built. And what techniques were used to build it. We also learned that Mr. Ikeya was one of the people who built the bridge. Mr. Ikeya explained to us many of the difficult encounters of building this bridge. He also said that the simulation of the underwater pillars were conducted inside Kajima. I looked inside of the museum and discovered the forefather of my nation came to visit here. Which touches my old memories of history class when I was a child. The exhibition center was very pleasant visit too. The exhibition showed lots of videos and pictures of the bridge under construction. There were also computers that gave exams to educate young children. The exhibit and the museum truly makes the bridge much more attractive to the public.



Disaster reduction and Human Renovation Institution

This is a memorial for the earthquake victims of the Hanshin-Awaji earthquake. The Museum has a re-experience room of the earthquake. Which is really unique compared to other earthquake museums. During the re-experience I felt scared and helpless. I think everyone should experience it. That way we can all get a better understanding of the devastating powers of an earthquake and know it would affect our lives. I think in Taiwan we should do the same as well. This way we can educate the young ones to be aware and be prepared for an earthquake. The museum also has many scientific experiments and shows. To show why some buildings didn't survive the earthquake and why some did. The speaker gave a very serious and also fun presentation. Museums play a very important role in civilization. They not only make us

remember but also teach us of the important lessons of the past. Which I think the DRI museum plays this role perfectly.

Waseda University

In the afternoon we visited Prof. Shibayama. The professor was very friendly to us. And totally understood what we international students need if we come to Japan to study. The professor even gave us a tour of the campus of Waseda. I believe the school life here must be very fun because Shibuya is very near the campus. The Professor was surprisingly very familiar with all our schools. And informed us of all the programs available to us. Which I'm very interested in. And hope in near future I can apply for such kind of international programs and come to Japan again.

I was fascinated the whole trip and after the student tour I continued to travel around Japan. I went to Kyoto and Osaka for a additional 7 days. These cities all gave me very different feeling compared to Tokyo and Kobe. Especially Kyoto, this city preserves its culture and history perfectly. I could easily see traditional Japanese houses wherever I go. I think that's why Japan is so fascinating. The future and the past meet each other in many places Clothing Architecture and culture etc. The balance between them and also combination of them makes Japan a really incredible country to visit.

Last but not least, I wish to express my sincere gratitude to the following persons for their hospitalities during my stay in Japan

Mr.Yaganawa



Dr. Ikeya



And the students of TIT

