



TAIWAN STUDY
TOUR 2014 REPORT





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FOREWORDS

“Formosa” (美麗島) is another name for Taiwan. The Taiwan Study Tour was held on 10-17 August 2014 and 15 students from different universities/institutes in Hong Kong participated in the study tour with the aim to develop knowledge in building engineering technology and promote exchanges in Asian countries.

This is the ninth year that the ASHRAE Student Branches in Hong Kong organized such a study tour. The students have worked together to prepare for the study tour. They have attended both the International Student Summer Camp at the National Chin-Yi University of Technology (NCUT) in Taichung and the ASHRAE Region XIII Chapters Regional Conference 2014 held in Taipei. During the summer camp, our students have conducted academic and cultural exchanges with students from Indonesia, Japan, Malaysia, Philippines and Singapore. They have visited the laboratories and research centres in NCUT, a machine tool company and a power station in Taichung. They have also participated in a wind turbine design contest. During the conference in Taipei, they have attended technical seminars and visited an air-conditioning company, a precise machinery company and a green library building in Beitou. They have also conducted academic exchanges at the National Taipei University of Technology. The study tour is exciting and very informative. It provided very good opportunities to understand the culture, universities and industries in Taiwan.

The people in Taiwan are very friendly and the food and scenery are very nice. This study tour has enabled our students to explore many interesting things in Taiwan and exchange ideas with peer groups and professionals through the ASHRAE community. It is believed that the experience will broaden their horizons and provide good opportunities to develop themselves in voluntarily professional activities.

On behalf of the study tour participants, I would like to express sincere thanks to the ASHRAE Hong Kong Chapter, ASHRAE Taiwan Chapter, the people of the National Chin-Yi University of Technology, the study tour sponsors and all related organizations for their kind support. I believe this study tour has created a significant impact to encourage exchanges and cooperation among the students.

I hope that the spirit of the study tour will be continued and the participants will extend the findings and experience to benefit themselves, other students and our industry.



Dr. Sam C. M. Hui
Study Tour Advisor
ASHRAE Hong Kong Chapter

ACKNOWLEDGEMENTS

Sincere thanks are expressed to the following organisations and persons.

Hsin Chong – K.N. Godfrey Yeh Education Fund for Joint Student Projects

ASHRAE Hong Kong Chapter

Dr. Sam C. M. Hui

Mr. Albert Lo

Ms. Tracy Pang

Mr. Thomas Chan

ASHRAE Taiwan Chapter

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Mr. WANG Wei-Dong (CRC 2014 Vice Chairman)

Dr. YANG Bing-Chwen (CRC 2014 Vice Chairman)

Dr. SHIH Yang-Cheng (CRC 2014 Student Program Chair)

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National Chin-Yi University of Technology (NCUT)

National Taipei University of Technology (NTUT)

ASLI Mechanical Co., Ltd. (New Taipei City)

Fair Friend Group (Taichung)

Hanbell Precise Machinery Co., Ltd. (Taoyuan)

Hitachi Appliances, Inc. (Taoyuan)

Industrial Technology Research Institute (ITRI)

Taichung Power Station at Longjing

EXECUTIVE SUMMARY

ASHRAE Study Tour is one of the most attractive student activities. In this year, there were 15 participants in total from City University of Hong Kong (CityU), the University of Hong Kong (HKU), the University of Science and Technology (HKUST) and Hong Kong Institute of Vocational Education (IVE) taking part in this TaiWan study tour from 10th August to 17th August 2014.

Student was able to enhance their knowledge and interests by joining seminars, visits and student programme during the study tour. In the Taiwan study tour, we joined different kinds of activities such as ASHRAE Chapter regional Conference (CRC), Chin-Yi Tech Student Summer Camp, technical seminars and banquet dinner. We appreciate that National Chin-Yi University of Technology and ASHRAE prepared these activities for our student to join. In addition, we met a lot of friends from different university during the Student Summer Camp and banquet dinner.

During the student summer camp, we visited the laboratories and research centres in NCUT, a machine tool company and power station in Taichung. Other than the technical visit, we also joined the wind turbine design competition and visit a lot of famous tourist spots such as Chung Tai Chan Monastery, Sun Moon Lake and Checheng Station. During the conference in Taipei, we also attended some technical seminars such as an air-conditioning company, a machinery company and green library building in Beitou. Moreover, the students from NTUT leaded us to visit the laboratories and show us the experiments of their studies such as the application of fuel cell. We also have a chance to visit the tourist spots in Taipei including Thermal Valley and Shilin Night Market.

Having a successful study tour, we need a lot of support, especially the support from ASHRAE Hong Kong Chapter. I would like to thank ASHRAE Hong Kong Chapter for supporting us on this study tour every year.

Moreover, I would also like to thank all the helper and student in Taiwan, especially students from NCUT to prepare the student summer camp for us so that we are able to learn a lot in the Green Energy and Precision Machinery Teaching and industrial Experience Activity.

Thanks Dr. Sam Hui for the supporting and giving us a lot of useful advice during the study tour and our study tour member, the time in TaiWan study tour brought us a lot of wonderful memories.



Wong Chi Pan, Harry (HKU)

INTRODUCTION

In August 2014, the ASHRAE Region XIII 17th Chapters Regional Conference will be held in Taipei, Taiwan. This study tour is designed to allow students in Hong Kong to attend the conference and also to carry out technical visits and academic exchanges. Successful study tours to other countries were organized in 2006-2013.

The objectives of this study tour are:

- To study the building and engineering technologies in Taiwan
- To enable the students to develop knowledge and skills in advanced energy technology, building environmental design and creative thinking
- To promote international cooperation, cultural exchange and mutual understanding in Asia

This study tour was held from 10th August to 17th August. Students from University of Hong Kong (HKU), City University of Hong Kong (CityU), the University of Science and Technology (HKUST) and Hong Kong Institute of Vocational Education (IVE) joined this study tour. Before the study tour, the students held meetings to discuss event and tour arrangement, seminars and presentations.

During the study tours, attending NCUT College of Engineering 2014 International Student Summer Camp, professional engineering conferences, technical visits, company visits and sightseeing had broadened students' horizon. In addition, students were able to meet different engineering students from the Philippines, Taiwan, Japan, Indonesia, Singapore and Malaysia. Cultural values could be exchanged with different student chapters and a better understanding of Asian countries would be developed.



ITINERARY

10 Aug 2014 (Sun)

Hong Kong to Taipei CX450 1000/1145

NCUT College of Engineering 2014 International Student Summer Camp

11 Aug 2014 (Mon)

Summer Camp introduction, welcome banquet

12 Aug 2014 (Tue)

Contest of creativity and skills, friendship activity

13 Aug 2014 (Wed)

Sightseeing in Taichung, Sun Moon Lake and Nantou

14 Aug 2014 (Thu)

Technical visits in Taichung Industrial Park and Power Station

ASHRAE Region XII Chapter Regional Conference

15 Aug 2014 (Fri)

CRC technical seminar

Technical visits to Hitachi Appliances & Hanbell Precise Machinery, Taoyuan
CRC banquet dinner

16 Aug 2014 (Sat)

Visit NTUT (National Taipei University of Technology)
Visit to Xinbeitou Library (green building), Hot Spring Museum & Thermal Valley
Evening: Visit to Shilin Night Market

17 Aug 2014 (Sun)

Taipei to Hong Kong CX495 1325/1510



TOUR EXPERIENCES

DAY 1



After around an hour of flight, we arrived at Taipei airport and went to have lunch with the friendly NCUT teachers and students who welcomed us at the airport. The foods were delicious while costing less compared with that in Hong Kong. After walking around a shopping mall and first feeling the culture of Taiwan, we moved to NCUT in Taichung before the sunset. Everything we reached was interesting and this was just the beginning. More meaningful and informative things we would meet were coming later.



Morning

This was the first day of Chin-Yi Tech Student Summer Camp. In the morning, the opening ceremony was held at Engineering building, Lecture Hall B1, in NCUT. And, it was the first time that all the participants met together. After that, a Taiwan Culture Introduction was made by Professor Su, Shao-wen from the Department of Applied English. It was a rare chance for us to know more about the local cultures. And, the presentation was very interesting and it showed us some funny video clips about the Taiwan cultures.



Noon

In the afternoon, we were divided into four groups to conduct the CNC lathe machining, working machine spindle assembling and running-in experiments at the multi-function practice factory of NCUT. In addition, the frequency-conversion energy saving and refrigerating air conditioning installation experiments were conducted in the green energy and environmental control laboratory of NCUT, allowing us to experience the models of training the practical technical and vocational skills adopted in Taiwan.

Course 1: Frequency-conversion energy saving technique practice & Course 2: Varied speed energy saving technique practice

During the courses, there was a presentation held by the professor from Department of Refrigeration, Air conditioning and Energy engineering. He mainly introduced Daikin Industries. Daikin Industries, Ltd. is leading innovator and provider of advanced, high-quality air conditioning solutions for residential, commercial, and industrial applications.

It was founded in 1924, with ninety years of history since its founding, Daikin has created global air conditioning history with new innovative technologies and products that have brought new firsts to both Japan and the world. Daikin leads the air conditioning market in the three cutting-edge core technologies: Heat pump (Absorbing and moves heat from the air), Inverter (Contributes to greater energy savings and comfort) and Refrigerant (Efficient heat transport). Daikin is the only manufacturer involved in all facets of manufacture, sale and servicing of wide range air conditioning products, systems and also refrigerants. It continues steady growth and pursuit of challenges. It has achieved global NO.1 in air conditioning sales in 2010-2012. With over 60 production bases in each region of the world, Daikin designs and quickly delivers products to match the specific needs of local customers. Daikin has earned a high reputation for promptness, reliability and kindness with an after sales service system that provides comprehensive support to its global air conditioning business.

Then they introduced the total heat exchanger, which is a new type of energy saving equipment for air-conditioning units. It can transfer perceived heat and latent heat simultaneously without mixing different types of air. Being highly effective in saving energy, they are often used to exchange heat between exhaust air and outdoor air introduced indoors.

DAY 2

Course 3: Mechanic design and Manufacturing practice 1

We learned scraping course in the Multi-functional practice factory of Machine Tool. Scraping is one of the fundamental techniques of mechanical industries. Currently, the inspection of scraped surfaces is done by human eyes based on experience rules. This prevents the standardization and improvement of scraped work pieces inspection. Studies on scraping patterns are also difficult to conduct. Scraping is the only method for producing an original set of flat surfaces from which one can transfer that accuracy through to other surfaces by means of grinding. One advantage of scraping is the ability to take the tool to the workpiece, this can be useful when the workpiece weighs several tons and is difficult to move. A hand scraper is a single-edged tool used to scrape metal vfrom a surface. This may be required where a surface needs to be trued, corrected for fit to mating part, needs to retain oil (usually on a freshly ground surface), or even to give a decorative finish.



Course 4: Mechanic design and Manufacturing practice 2

After the description of the background of the mechanical theory, we had a chance to learn the software PowerMILL. PowerMILL is a 3D CAM (Computer-aided manufacturing) solution. The software is used in a range of different engineering industries to determine optimal tool paths to reduce time and manufacturing costs as well as reduce tool loads.





Welcome dinner

In the evening, a welcome party was held in the Jiu Shian Hall. We were so pleased to meet friendly students and enjoy the performance. After some songs' warming up, teachers from NCUT have prepared lots of splendid programs for us. Then a magic show performed by students from NCUT won the applause of the crowd. All students were engrossed and gathered in the front of the stage. Afterwards, students from NCUT showed a chorus and made a hit. We also brought them some famous Cantonese songs. Finally, the party ended in cheers and applause. We all enjoyed ourselves in the party and set up profound friendship with the students from Taiwan and foreign students.



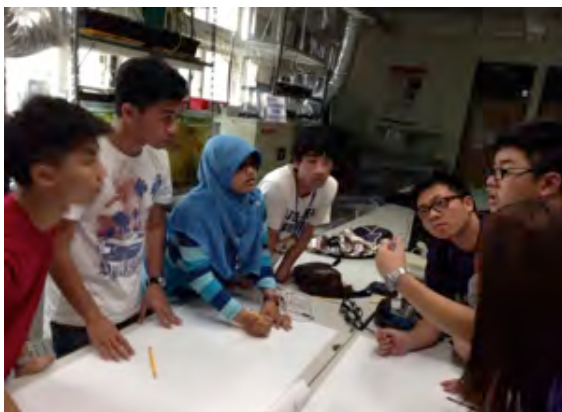
DAY 3

It was the third day of the NCUT Summer Camp and we could finally escape from the lectures and seminars which reminded us of the dull and repetitive school days. That day's main activity was the wind turbine design competition!

Having no prior experiences and studies on wind turbines, we were all really frustrated at how to make it the most efficient, using limited materials. However, nothing is too difficult when engineering students from many Asian countries put their hands together! Some groups decided to come up with the most viable and confident design while some others made more than one to find the one with the highest efficiency.



Everyone was so devoted! By doing this project, we, students from different countries, had a great chance to exchange our ideas and thoughts. It was a valuable opportunity for us to know more about each other and learn to work in a group with different people. The prize was never the most important but the friendship and effort we made gave us satisfaction and success. Meanwhile, the students from NCUT offered us each a cup of Taichung's famous drink, bubble milk tea. It was much tastier than those in HK with crushed ice and chewy bubbles! The tea definitely gave us an energy boost for us to finish the project!



After that is the testing section, we were all very excited and yet nervous about our own wind turbines. Some of the final products looked like ordinary ones but some were really creative, with different shapes and colours!



DAY 3

Finally who won?

It was Group 1, with 3 students from HK! Their wind turbine had an efficiency around 2. Although it was far from those we use to generate electricity, it was already an encouraging result that we could achieve in such a short time of making! However, other groups also made great effort so all of us got our own certificates as a reward.



Take a look at all of our wind turbines! Everyone not only take away the knowledge but also the happy memory of us making these unique wind turbines together!



DAY 4

We and other students from Asia had an adventure on that day. All of us wore in a blue T-shirt given by the NCUT and started our journey in the early morning.

Our first tourist spot was the Chung Tai Chan Monastery, located in Puli, Nantou County. It is a large Buddhism Temple with modern architecture design. There is an exquisite garden with an elegant lake and bridge. It is founded by the Venerable Master Wei Chueh in 1987 and completed in September 2001. It is the tallest and one of the largest temples and monastery in both Taiwan and the world, having a height of 136 meters. Beside the Monastery, there is Chung Tai Museum which is a famous Buddhism museum. Visiting the graceful temple and Buddha widen our horizon.



Then, we go to the Sun Moon Lake, one of the most famous tourist spot when visiting Taiwan. It is the largest body of water in Taiwan, situated in Yuchi, Nantou County. It is the home of Thao tribe, one of aboriginal tribes in Taiwan. The reason why it is called Sun Moon Lake is that the east side of the lake resembles a sun while the west side resembles a moon.

When we arrived to the lake, we rode around it. Riding bicycle to enjoy beautiful views is a famous activities for Taiwan Tourism. Breeze came over our face with fresh and wet air. Every inch around the lake could be explored by the riders. Although we do not have enough time to completely ride around it, it is a very special experience for us.



After the interesting sport, we visited the Checheng Station. It is a railway station on the Taiwan Railways Administration (TRA) Jiji Line located in Shueili Township, Nantou County, Taiwan. Originally, it was established on 14 January 1922 as Waichecheng Station. However, it renamed to the current name in 1961.

In the station, the old buildings brought us back to 70s. There are train rails which are rarely seen in Hong Kong. Also, there are stilts and other traditional Chinese toys for us to play or buy. Some students had tried playing stilt but it is not easy at all. The old architecture and toys had created a relax environment and unforgettable memories for us.



The finale of our adventure is visiting the Yizhong night-market. It is a shopping area near many educational institutions: National Taichung First Senior High School, National Taichung University of Science and Technology and National Taiwan University of Physical Education and Sport. Taiwan students were very nice that be our guides and shopping in the market with us. We had tasted different delicious famous Taiwan's food, such as pearl milk tea, lou mei and fired chicken. Not only food, but also clothes, accessories and skin care products would be brought there.

DAY 5

On 14 August 2014, we visited Fair Friend Group for a technical visit. Below is our technical report summary of the visit.



The topic was Renewable Energy Construction in TPC. First, we had some basic information from the speaker about the location of wind farms in TPC and also the Taiwan Power Company Wind Farms. The speaker told us that there were future wind power projects of TPC in response to sustainability requirement of the global village. 7.2 MW of capacity has been consumed for onshore during 2014-2015.

Specification of Penhu wind farm:
Type: EXERCON (E40)
Rated power: 600kW x 8
Blade Length 21.85m
Nacell H 46m
Cutin V. 2.5m/s
Cutout V 34m/s
Rotate Sp. 18~38 RPM



Pouring of concrete, installation of foundation and construction of steel foundation were shown on the speaker's slide. 30 days is needed for solidification of concrete.

Rotor Blades Installations on the Ground was also shown. Besides, Taichung Harbour has wind farms as well since it is close to the sea. Another wind farm is Hushi wind farm.

Next topic is about PV Technology. Solar energy and PV Energy Prediction were studied and the speaker mentioned the importance and application of PV technology nowadays in the building industry.

In the afternoon, we visited the wind farms and had a factory visit for air-conditioning equipments such as chillers and window-type air-conditioners. In short, we had a very comprehensive technical visit and valuable experience for this visit.





Then we came to Dashi which is an urban township in Taoyuan County, Taiwan. It is one of the famous tourist spots in Taiwan. There is a rivulet called Takoham which is in native Austronesian language lying on the Dashi area. It is the Tahan Rivulet in Chinese so that the township was named Dashi.

The Tahan Rivulet has been constantly veering its course left and right, and therefore marks a different look of the terrain and widens the riverbed. When viewing from the precipice of the Dashi Chiang Kaishek Park, you will be able to take a full picture of Tahan Rivulet. It was said that during early days when water transportation reached its high peak and flourishing period, the number of ships and boats shuttling along the rivulet for trading and business purposes was up to about 250 to 300 everyday. Ships that traveled from Taipei to Dashi built up wonderful scenery on the wide rivulet during nighttime. The boats were moving slowly with all the dotty lights coming from the lamps. This was the renowned "Returning Seal of Kanjin".



The Dashi Old Street mainly includes Hoping Road and Zhongshan Road, so it is also called Hoping Old Street. There are some famous historical buildings, such as Wude Temple, Puzi Temple, Fujen Temple, Kenko and so on. The designs of some temples are in Japanese style like some complicated decoration. It is due to the reconstruction when Taiwan was a dependency of Japan between 1895 and 1945. However, we some buildings look like European structure. For example there was Presbyterian Church of Dashi at the end of the street.

Nowadays, no more water transportation through Dashi Rivulet is and less and less local people living there. However, there are still many stores selling food, drinks and souvenirs for tourists. The traditional structures are kept since its historical and meaningful style is a priceless treasure.



DAY 6

ASHRAE is renowned for being a global leader in the arts and sciences of heating, ventilation, air conditioning and refrigeration. Hence, the ASHRAE Region XIII CRC is undoubtedly the main highlight of this study tour. Apart from the ASHRAE handbooks and technical bulletins, students can also benefit from attending the Chapter Regional Conference.

What researchers and practitioners can get in the conference is the golden opportunity of sharing ideas, information, experiences, new developments and future prospects with their counterparts. In this conference, topics about Building Energy Labelling program, analysis of actual and designated performance of building and use of green roof in subtropical climate regions were discussed. A total of four speakers have conducted their speech and shared their research ideas to all of us. One of them was the teacher in charge of ASHRAE Hong Kong Chapter Dr. Sam Hui. Through his speech he introduced and explained the potential benefits of green roof adoption in subtropical areas and ASHRAE Region XIII member countries like Hong Kong, Singapore and Malaysia. As a building services engineering student, it was truly an unforgettable experience to participate in such a great conference. Through attending technical seminars, we can acquire new knowledge about current developments and technologies.



Apart from the technical seminars in the morning, ASHRAE Taiwan Chapter also arranged two technical visits for participants. The first visit is to Hanbell Precise Machinery Co., LTD in Taoyuan. It is a well-known machine production company and has been ratified as "important technical corporation" by Industrial Development Bureau, Ministry of Economic Affairs. It has several research and development centres and factories in Taiwan and Shanghai and we have visited its factory in Taoyuan.

The second one is Taiwan Hitachi Appliances. This famous brand is also very popular in Hong Kong since most of us also adopted its air-conditioning products. We visited its factory by a guided tour and acquired technical knowledge through the visit. This is very important to us since we will be professional engineers in the future and it is necessary for us to understand the factory processes of mechanical equipment.

CRC: BANQUET DINNER



During this banquet dinner, all the student branches have to do a performance which is related to their countries on stage.

For us (Hong Kong Chapter), we had prepared to do a puzzle show. The show can be separated into two parts: the video and the show. The video is about different buildings in Hong Kong and our student had done some description for it. At the same time, other students had used the puzzle to build the buildings next to the Victoria Harbour. It is a special performance in the whole night.

On the other hands, other student branches also had some interesting and exciting performances, for example the Philippine Chapter performed a dance which was the best performance throughout the night and cheered by all the participants.



DAY 7

In this morning, we visited National Taipei University of Technology (NTUT). NTUT was established in 1912, the year when the Republic of China came into existence, as a pioneering academic institute dedicated to industrial education. It has been renamed since then Taiwan Public Industrial School of Taipei (1919), National Taipei Institute of Technology (1981), and National Taipei University of Technology (1997). Since 1912, over 90,000 students have graduated from the University. At home and abroad, they have demonstrated outstanding achievements in professional fields as well as academic arenas. They are not only the assets of the University but also of the nation because of the crucial contributions they have made to technological and economic development of Taiwan.



In this visit of NTUT, the students of NTUT led us to visit the laboratories in NTUT and show us the experiments of their studies such as the application of fuel cell. What's more, the teachers of NTUT introduced the development of the technology to us and they gave us a chance to discuss the patent of the technology in NTUT. Through the visit of NTUT, it let us know more about the U-life of students in NTUT and it showed us the achievement of the academic development.

City Tour: Xinbeitou District



Beitou District is the northernmost of the twelve districts of Taipei City, Taiwan. Beitou is the most mountainous and highest of Taipei's districts, encompassing a meadow with rivers running through the valley which have abundant steam rising from them; the result of geothermal warming. The valley is often surrounded by mist shrouding the trees and grass. Beitou is famous for its hot springs.



We visited the Xin Beitou Hot Springs Museum, it provided lots of information about the development and history of Xin Beitou District. After that, we had a real inspection to the thermal valley, it showed that how the Taiwan government preserve the environment while develop the tourist attraction.

We had a visit to Xin Beitou Library which is the first building in Taiwan to receive the certification of "Green Building". The structure makes generous use of windows and natural light, and blends in with the surrounding environment.

Beitou Library is "green" from inside to outside! Part of the roof is covered in solar panels, which can store up to 16KW of power. The wooden balcony railing is also eco-friendly; its vertical design conserves energy by reducing the amount of heat-causing rays allowed to enter the rooms. Rainwater collected by the sloping roof's drainage system is used to water the library's plants and flush the toilets. Eco-friendly paint was also used, to reduce the amount of toxins released into the environment.



DAY 7



Shilin Night Market is the one of the largest night markets in Taipei. The market is centered on Yangming Theater and Cicheng Temple. The night market is formed by many prosperous shops on Wenlin Road, Dadong Road and Danan Road, etc. Among them, Shilin Market was built as early as in 1899 and the market is famous for various snacks and eatery. It is separated into two major sections. One sector covers the streets surrounding the traditional Yangming Theatre and stretching to the Chicheng Temple on Danan Rd. The other sector is a centralized food court serving a wide variety of snacks that attract large crowds. Many visitors have come to Shilin Night Market to enjoy the delicious foods, such as large pancake enfolding small pancake, hot pot on stone or Shilin sausage. Shilin Night Market has become a renowned place for great foods with reasonable prices.



Because the night market is close to many schools, students are the main customer group. Goods are sold at less expensive prices as compared to regular stores. There are special areas for furniture, clothing, photo shops or pet shops. The finery shops and cold dessert shops in "lover's lane" attract most student customers.

Shilin Night Market covers a large area. When one walks in the turning lanes and alleys, he (she) would often find something unexpected. The night market is packed with many people during holidays. We can often see families carrying many things from shopping and enjoying good meals. Their satisfaction is fully shown from their happy expressions.

DAY 8

Happy time flies just like flash. We left Taipei after breakfast with Taiwan's students. It was sad for us to leave as we have built up a good friendship. During the four days of summer camp, we have gained lots about building engineering technologies and Taiwan's culture. During the three days of CRC in Taipei, we have not only enriched the knowledge, but also broadened our view as we interacted with the student from other countries. All in all, It is a meaningful and worthy trip.



REFLECTIONS

Cheung Wai Pan, Ben (IVE)

I am pleased to have the chance of joining the Taiwan Study Tour 2014. It was a valuable experience to meet students from around the world. Thanks to the enthusiastic Taiwan students and other ASHRAE members, we all got a good learning and travel experience. We got along with the local people, visited the industrial plant, walked into the museum, and traveled to some local night market. We were not only learning the practical knowledge of our industry, we also learnt the local language, enjoyed their tasty food and felt the local culture.

In the beginning of the tour, I have feared that it was difficult to get along with other participants in the tour. However, at the end of the tour, I have befriended with each Hong Kong Chapter's participant, and even have some friends in other chapters. This was the most amazing thing throughout the tour which was out of my expectation.



Chan Wing Ki, Crystal (IVE)

I am glad to participate in the Taiwan Study Tour 2014 which was conducted by ASHRAE Hong Kong Chapter. For me, it was a valuable and unforgettable experience. Within the days, we met a lot of people from different countries including Taiwan, Singapore, Philippine and etc.

In the study tour, the most memorable part for me was the National Chin-Yi University of Technology (NCUT) summer camp. In the camp, we lived with them in the dormitories of NCUT and experienced the study life of students who were studying in the NCUT. Furthermore, I felt a great enthusiasm from the students in Taiwan, which was not expectable.

I feel thanks to the students who I met in the study tour and gave me this extremely perfect memory, and I hope we will meet in the future.

Li Xiaochen, Danica (HKU)

While participating in the Taiwan study tour, I was exposed to fundamentals and all aspects relating to green building technology, which helped me to broaden my horizons and gain valuable experience. Not only was this opportunity very valuable to me, I am certain that it will assist me to my later development in my career in this field.

A week is too short in one's life, but with the inspiration as a key, I may open a brand new door to my future journey. In that way, this study trip could benefit me for long. What this trip has granted me I cannot decide at the moment. Maybe I could never tell it with limpidity, but it will always be in my memory as a precious part.

At last, I want to thank everyone, everything that gave me this rare opportunity to experience and gradually brought brightness to my heart.



REFLECTIONS

Lam Choi Ha, HaHa (CityU)

I was glad to be one of the participants in the Tai Wan Study Tour and the Chapter Regional Conference (CRC). Time in Tai Wan brought me a lot of wonderful memories. We have joined a summer camp provided by National Chin-Yi University of Technology (NCUT). The students from NCUT are very nice and responsible on their roles. They provided strong supports to show us the greatness of HVAC machines and systems in Tai Wan. In addition, we had a competition of wind turbine design and it was my pleasure to design with group mates from other countries.

During this study tour, I can meet many friends from different countries like Taiwan, Singapore, Malaysia and Philippines. It was so happy to chat with them and know more about their countries' culture. Especially in the CRC banquet dinner, I was to their outstanding performances and hopefully I can meet them once again next year. Finally, this study tour provided an unforgettable and meaningful summer camp to end of my summer holiday.



Leung Pan Chak, Jimmy (CityU)

The Taiwan study tour is an unforgettable experience for me. In the 8-day study tour, I had learnt the different culture between Hong Kong and Taiwan. In Hong Kong, we can eat different kinds of food. It is similar in Taiwan but the taste may be different from Hong Kong.

The target of the study tour is to meet the students from other countries and exchange our knowledge. In the study tour, we have gone some universities in Taiwan. The study of the students is more practical than Hong Kong. We saw a lot of machines in the laboratory and it is similar to our IC training in PolyU. I think it may be easier for the student to understand the system.

After the Taiwan study tour, I have changed my view in HVAC engineering. In the past, I think air conditioning may not be very important. However, it is really hot in the campus with no air conditioning. It is really a wonderful memory for me.

REFLECTIONS



Liao Wen Tao, Jerry (CityU)

The ASHRAE Taiwan study tour is the most meaningful and fascinating thing which I had done in this summer. Plenty of students from different countries arrived at National Chin-Yi University of Technology to attend an international summer camp. At beginning, I was worried about my poor English would be a problem to communicate with others. However, I realized that enthusiasm could overcome the barrier of languages, so that each of us experienced the international culture exchange and interaction. It was a great experience. Apart from the international camp, I also attend the 17th CRC and many site visit in Taiwan. All of these enrich my engineering knowledge and know more about the develop trend of Taiwan's engineering industries. The mature development of wind power in Taiwan impressed me most.

Lai Wing Man, Lemon (CityU)

Eight day in the study tour flies too fast. There are many priceless memories and friendships created in the trip. We had built wind turbines, played ball games, visited famous tourism spots and shopping in night markets with students from different countries. I find that enthusiasm could overcome the barrier of languages. No matter where are we come from, we could played together. It is a treasure experience.

The most unforgettable activity for me was the competition of building wind turbine. Our team had spent many time to brainstorm the most efficiency design. We had asked advices from teachers and examined the real wind turbine a lot. At the end, we did it! We made a quiet effective turbine. I love that process of solving the problem with group mates and achieved the goal together.



Chu Long Yin, Long (CityU)

It was my honor to join the ASHRAE Taiwan Study Tour 2014. Held between August 10th and 17th, the 8-day study trip gave me a fruitful and unforgettable experience. In the first part of our study tour, we were warmly welcomed by the NCUT students in the summer camp. We also had lots of chances to exchange and shared our thoughts with students from different Asian regions during the camp. It was a valuable opportunity for me since I like to meet new friends from diverse cultural backgrounds and learn from them. For the second part, we joined the CRC seminar, banquet dinner and a number of visits in Taipei. I was truly overwhelmed to attend these kinds of activities since I could never imagine participating in them as a student. I really learned a lot from them, not just the engineering knowledge but more importantly, how engineering transformed and helped our society. It was undoubtedly the best study tour I have ever joined and I sincerely hope to join it next year!

REFLECTIONS



Wong Lai Ning, Ning (CityU)

It was the first time for me to join the CRC program and ASHRAE study tour. It is very unforgettable for me. For the study tour, it separate into two parts which include the Chin-Yi Tech Student Summer camp and CRC program. During the summer camp, we have chance to construct our own wind turbine, visiting the campus and laboratory of Chin-Yi and enjoy the school life of being a Taiwan student. I have meet lots of student from different country and I have learnt more culture about other countries. Also, we had some sightseeing activities in Taiwan, such as Sun Moon Lake, night market in Tai Chung and Tai Pei. Moreover, we had visited different company such as Hitachi and Taiwan Power Electric generation factory. For the second part of the study tour was CRC program. During the activities of the program, we had visited one more university and have chance to visit the thermal valley and green building in Taiwan. In the dinner, each country had prepared our own performance and we can enjoy the show. It was happy for me to include in this study tour. I have meet lots of friends and I hope I can join the study tour next year. =]

Lo Wai Sin, Pang (HKU)

This is my second time to go on an ASHRAE Study tour. Last time to Indonesia was fun that we went to many beautiful places and met so many people. This time it was MUCH MORE FUN that I didn't expect! The CRC was as usual but the summer camp was really exciting and enjoyable. To be honest, at first when I looked at the schedule I saw there would be lectures and I thought "What?! Oh no! It's gonna be boring!" (Well...they were kind of boring though...) However, I met a lot of old friends from last year and many new friends in the camp. We had so much fun sharing what we have done after the tour to Indonesia, our local cultures, and learning different languages. What surprised me most was that Japanese students speak English better than I thought. I was really afraid that we couldn't communicate with them but we finally became good friends. Apart from these, I enjoyed the tour section in NCUT. It allows me to explore the differences between the universities in HK and TW. I found that students in TW have more practical exercises like welding of gas pipes and operation of chillers. I also like the trips to Daxi where I would be taking lots of photo if my camera wasn't broken... This summer camp is definitely one of the best camps I have been to! I really want to express my deep gratitude towards the NCUT students because I know they spent a lot of time and effort on it. They always had meetings in the midnight and were under huge pressure. I sincerely give them my biggest thanks for bringing us an unforgettable experience and precious memory.



REFLECTIONS

Go Ho Fai, Harvey (IVE)

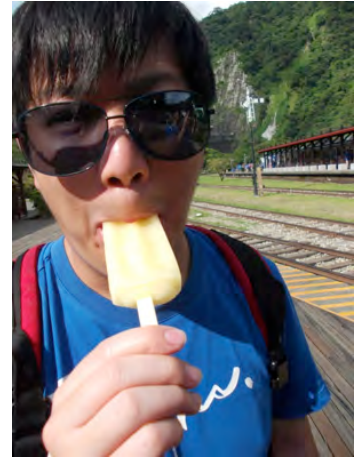
The Taiwan Study Tour 2014 was my third time visiting countries in region XIII as I was able to join ASHRAE's Chapters Regional Conference in Taipei. I was excited about meeting all the students, experts, engineers and designers in the industry as they all showed their passion in advancing the technologies to build a better environment for human beings.

During this tour, we have joined the Summer Camp in National Chin-Yi University of Technology which was supported by the Taiwan students. In these programs, we have interesting seminars by professors and also visited the factory of Hitachi Appliances & Hanbell Precise Machinery in Taoyuan. I have known more about the learning environment and industries development of mechanical engineering and HVAC&R industry here in Taiwan.

Besides, the tour has arranged a few technical visits to power plant using wind turbine generators and green building projects including Xinbeitou Library. The engineers introduced us the challenges of using sustainable energy and the latest technologies involved in the design. Moreover, I was impressed by the beauty of this country when we travelled to Sun Moon Lake, a lake which is located on mountains. We had the chance to cycle around the lake while enjoying the beautiful scene of the lake.

I would like to give my appreciation to the Taiwan Student for their warm welcoming in the study tour as they provided strong support and did their best to show us the greatness of Taiwan through cultural exchanges and making friends with them. Although we have stayed together for a few days, we have fun together and developed a valuable bonding between us and hopefully to meet them once again in CRC next year!

Finally, I would like to thank for the great effort of ASHRAE Hong Kong Chapter for providing such a great opportunity for us to join this study tour and make it possible to learn and to connect with students from other countries.



Wan Siu Yuen, Steve (UST)

I was really glad to have this chance to join this Taiwan Study tour 2014. This 7-day study tour gave me a chance to know more about the industry and meet friends from different countries, like Taiwan, Singapore, Malaysia, and Japan. The most impressive section in Chin-Yi Tech Student Summer Camp for me was the wind power generation design contest. In order to manufacture a wind turbine with great efficiency, each group member also show their passion to make it be perfect. Although I am not good at speaking English, we still found other ways to share our ideas such as drawing picture, using body language.

REFLECTIONS



Wong Hoi Kwan, Billy (HKU)

It is my first time to participate in ASHRAE study tour and it is my first time to go to Tai Wan. I would like to express my gratitude to ASHRAE and the corresponding teachers and staff for organizing such a fruitful trip for us. We met and made many new friends from different countries. I feel so happy to have an opportunity to join the this study tour. I believe that this study tour enabled me to get some new knowledge in HVAC.

During this study tour, we visited many cities. They are Taipei, Taichung, Tainan, Kaohsiung, Hsinchu. I enjoyed very much sightseeing at attractions including both academic and cultural exchanges, universities & government departments and building projects & factories, which opened my eyes and expands my horizons. We had a very good time there and watched many excellent and remarking performance during that nights. We gained many benefits and knowledge during August 2014, when the ASHRAE Region XIII Chapters Regional Conference was held in Taipei, Taiwan. This study tour was specially designed for us o attend the conference and also to carry out technical and academic visits and exchanges.

Chan Wai Chung, Henry (HKU)

I was very glad to have the opportunity to join the study tour held by ASHRAE this summer in Taiwan. The itinerary was substantial which includes a summer camp in National Chin-Yi University of Technology and the Chapter Regional Conference in Taipei. The trip was arranged well and the most important thing was what I have gained during the trip. We attended some courses and workshops in NCUT and visited NTUT in Taipei and some companies such as Hitachi and Hanbell Precise. It not only broadened my horizons, but also helped me to learn more technical knowledge and enrich my practical experience. Other than knowledge in engineering, I knew more about Taiwan including places, cultures, study life and languages. The students in Taiwan are friendly and told us a lot about Taiwan. Through the study tour, I met lots of new friends not only from Taiwan, but also from other countries. It was a great chance for us to exchange knowledge and culture each other. It really worth and I have gained a lot.





HONG KONG INTERNATIONAL AIRPORT



NATIONAL CHIN-YI UNIVERSITY OF TECHNOLOGY

GALLERY



CHUNG TAI CHAN MONASTERY



TAIWAN POWER COMPANY WIND FARMS



CRC TECHNICAL SEMINARS



CRC BANQUET DINNER

GALLERY



CRC PERFORMANCE



NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY



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