



Indonesia Study Tour 2013 Report

ASHRAE HONG KONG CHAPTER

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FORWORDS

It is my pleasure to introduce to you the successful outcomes of the Indonesia Study Tour held on 26 August-1 September 2013. 21 students from different universities/institutes in Hong Kong have carried out the study tour with the aim to develop knowledge in building engineering technology and to promote exchanges in Asian countries.

This is the eighth 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 the ASHRAE Region XIII Chapters Regional Conference 2013 and conducted academic and cultural exchanges with students and professionals in Indonesia and other countries. They have visited the University of Indonesia, the Bandung State Polytechnic, a green campus project at the Prasetya Mulya Business School, a green office building at Bumi Serpong Damai (BSD) City, the Indonesia Miniature Park, a dormant volcano at Tangkuban Perahu (West Java) and the Thousands Island. The journey is very interesting and informative. It provided very good opportunities to understand the culture, universities and green building projects in Indonesia.

Through this study tour, the students could interact with the people from other universities/institutes, the local Chapters in ASHRAE Region XIII, people from the ASHRAE Headquarters, and the students and professionals in Indonesia. This will enable them to learn many interesting things and exchange ideas with peer groups and professionals. 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 Indonesia Chapter, the study tour sponsors and all related organizations and people for their kind support. I believe this study tour has created a big 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. The next study tour to Taiwan will be held on 15-21 August 2014. Further information can be found on "www.ashrae.org.hk/studytour/".



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

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EXECUTIVE SUMMARY

It is the first time for ASHRAE Study Tour to take place in Indonesia. There were total 21 participants from the City University of Hong Kong (CityU), the Hong Kong Polytechnic University (PolyU), 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 Indonesia study tour from 26th August to 1st September 2013.

In this study tour, students could enhance their HVAC&R knowledge by attending seminars, visits and student programme. It was a golden chance to broaden our horizons and spread our culture among different student branches in region XIII. During the tour, we participated in many activities such as ASHRAE Chapter regional Conference (CRC), technical seminars, banquet dinner and Energy Efficiency Championship. We appreciate that ASHRAE arranged these activities for us to enhance our understanding on energy efficient technology, green building and HCFC phase out management. Apart from technical aspects, we met a lot of friends from different countries during the banquet dinner and energy efficiency championship. We also prepared an excellent performance for the banquet dinner.

Moreover, we visited the local ASHRAE student branches, Green Campus Project and Scientia Business Park Project. Those green buildings showed that the Indonesia Government put their effort on green development. Apart from the green projects, we had sightseeings over Indonesia such as the Indonesia Miniature Park, the Natural Park of Tangkuban Parahu Volcanic Crater and Thousands Island. Those places were wonderful for us to know more about Indonesian culture.

To organize a successful study tour, the supports from ASHRAE Hong Kong Chapter is important. We would like to take this chance to show our appreciation to ASHRAE Hong Kong Chapter for supporting students' activities and enhancing the knowledge on HVAC&R.

Thanks for the support from Indonesia student branches during this study tour and their preparation for the excellent programs to let us know more about Indonesia.

We would like to give our special appreciation to Dr. Sam Hui for the itinerary arrangement of the study tour and the guidance in Indonesia. Thanks to our tour members for their participation and contribution as our friendship would be valuable in our lives.

Ms LAW Ting Fung, Michelle
Team Leader
Indonesia Study Tour 2013



INTRODUCTION

The ASHRAE Region XIII Chapters Regional Conference was held in Jakarta, Indonesia in August 2013. This study tour was designed to allow the students in Hong Kong to attend the conference and also to carry out technical and academic visits and exchanges. Successful study tours to other countries were organized in 2006-2012.

This study tour was aimed to study the building and engineering technologies in Indonesia, enable the students to develop knowledge and skills in advanced energy technology, building environmental design and creative thinking and to promote international cooperation, cultural exchange and mutual understanding in Asia.

This study tour was held from 26th August to 1st September. Students from University of Hong Kong (HKU), City University of Hong Kong (CityU) 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.

Hong Kong students arrived in Jakarta, Indonesia on 26th August. In the first two day, students visited the University of Indonesia and Politeknik Negeri in Bandung to have cultural exchanges. Apart from academic visits, students visited Green Building and Project in Jakarta in the following days. Also, students in Indonesia organized the Energy Efficiency Championship and the trip to Thousand Island for all the students joining the CRC.



ITINERARY

Tour Date: 26 Aug - 01 Sep 2013

26 Aug 2013 (Mon)

Depart Hong Kong to Jakarta CX777 0920/1305

27 Aug 2013 (Tue)

AM Visit to University of Indonesia Campus in Depok

PM Visit Taman Mini Indonesia Indah (Indonesia Miniature Park)

28 Aug 2013 (Wed)

AM Visit to Bandung (POLBAN)

PM Visit to a dormant volcano at Tangkuban Perahu (West Java)

29 Aug 2013 (Thu)

AM Technical visit: Green campus project at the Prasetiya Mulya Business School (Serpong)

PM Technical visit: Green office building at Bumi Serpong Damai (BSD) City

30 Aug 2013 (Fri)

AM CRC Student Program: Energy Efficiency Championship

PM CRC Technical Seminar and banquet dinner

31 Aug 2013 (Sat)

CRC Student Program: Day trip to Thousands Island

01 Sep 2013 (Sun)

Depart Jakarta to Hong Kong CX776 1445/2040

LET'S
EXPERIENCE
OUR TOUR!

We would like to invite you to join our tour, feel the happiness, excitement we had and enjoy the Indonesian culture.



DAY 1

Upon arrival, we settled down at the hotel and walked around to explore the surroundings. It was already very late and we had a simple dinner at the mall.

After that, we went to the beds to prepare ourselves for the exciting and unexpected tour...

DAY 2

UNIVERSITY OF INDONESIA

This was our first visited university in Indonesia. The University of Indonesia is very famous in Indonesia. It has a modern, comprehensive, open-minded, multi-culture and humanism campus that covers wide arrays of scientific disciplines.

University of Indonesia (UI) simultaneously strives to be one of the leading research universities and the most outstanding academic institution in the world. As a world class research university, UI seeks to achieve the highest level of distinction in the discovery, development and diffusion of advance knowledge regionally and globally. Meanwhile, UI is distinctive among research universities in its commitment to the academic invention and research activities through various scientific programs.



In this tour, we visited the Department Teknik Mesin (Department of Mechanical Engineering). The students from the student branch there were very friendly to welcome us. At the beginning, they introduced their university and department. After their presentation, we also gave a short presentation to introduce our study tour and ourselves. They remembered our names very quickly!



The students then led us to visit their campus. Their campus was huge and beautiful. Before lunch, we sat together in an open area outside the library. They taught us some useful Indonesian phrases. For example, the number 1 to 10 and thank you (Terima kasih). We also shared with them our impression on Indonesia. This was truly a communication between different cultures.

DAY 2

TAMAN MINI INDONESIA INDAH (Indonesia Miniature Park)

On the second day, we went to the Indonesia Miniature Park (Taman Mini Indonesia Indah). We visited a lot of Indonesia hot spots including Pangeran Diponegoro Mosque, Indonesia Museum and Orchid Garden which all impressed our minds. We all had a good sharing of what Indonesia was, an island country that offers a unique cultural diversity to people, which attracted us to explore the island.



Indonesia is well known of its cultural diversity from thousands of islands and a lot of different tribes. There were different museums showing us the cultures and the lives of Indonesian. We had a complete overview of what they do, what they eat and how they live. One museum displayed various wedding gowns of different regions and traditions. It broadened our views and this visit was worthy, valuable and rewarding.



DAY 3

POLITEKNIK NEGERI BANDUNG (POLBAN) STUDENT BRANCH

When we arrive Politeknik Negeri Bandung, we were very happy because we could leave the shuttle bus to an immobile place. It took us a very long time to be there.

In the classroom, tables and chairs had been arranged before we arrived and the setting was similar to Hong Kong secondary school. Also, they put a box on every table. Surprisingly, there were food in the box. They were well-prepared for us.



After doing the presentation by us, Politeknik Negeri Bandung Student Branch led us into their laboratories. They gave us a nice explanation about the equipment. We were so grateful for them because they paid a lot of effort and invested so much time to prepare this visit.

In the end, the girls and the boys took group photos separately for commemorating.



BANDUNG SIGHTSEEING: TANGKUBAN PARAHU VOLCANO

Bandung is the capital of West Java province, the country's third largest city, in Indonesia. Bandung has cooler temperatures year-round than most of the other Indonesian cities. The city lies on a river basin surrounded by volcanic mountains.



We had a visit to Ratu Crater, Tangkuban Parahu Volcano, West Java. The name translates roughly to “upturning of a boat” or “upturned boat” in Sundanese, referring to the local legend of its creation. The story tells of “Dayang Sumbi”, a beauty who once lived in West Java.

It is a popular tourist attraction where tourists can hike or ride to the edge of the crater to view the hot water springs and boiling mud up close. This stratovolcano is on the island of Java and last erupted in 1983. Together with Mount Burangrang and Bukit Tunggul, those are remnants of the ancient Mount Sunda after the plinian eruption that caused the Caldera to collapse.

DAY 4

GREEN BUILDING VISITS

On day 4, we went to two green buildings in Jakarta. They were the Green Campus Project and the Scientia Business Park.

Green Campus Project

From its name, we know that this campus is definitely environmental-friendly. Here are some of its green features:



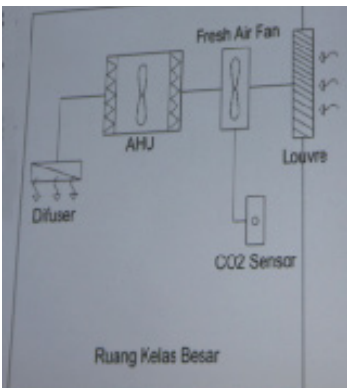
Green Environment

Around 17% of the campus area was planted with trees. Trees can produce oxygen and absorb carbon dioxide. This creates a clean air environment and promotes the purpose of landscaping.



Natural Lighting

There were windows in the each room. With the bright sunshine in Jakarta, this can reduce the use of electricity.



Natural Ventilation System

The use of natural ventilation is definitely an advantage regarding the cost and environmental impact of energy use. It provides fresh air to ensure safe, healthy and comfortable indoor conditions, it also provides free cooling.

Scientia Business Park

A commercial area covering 7.1 hectares in the 'Smart & Green Environment', Scientia Garden is equipped with exclusive facilities. When we first stepped into the building, we found the huge and gorgeous models right in middle of the hall which indicates it has built a reputation as one of the leading property in Indonesia.





ASHRAE REGION XIII CHAPTERS REGIONAL CONFERENCE (CRC) 2013

Joining the ASHRAE Region XIII CRC is the main highlight of this study tour. It is well known that ASHRAE is a global leader in the arts and sciences of heating, ventilation, air conditioning and refrigeration. Apart from the ASHRAE handbooks and technical bulletins, members can also benefit from the Chapter Regional Conference.

What researchers and practitioners can get in the conference is the opportunity of sharing ideas, information, experiences, new developments and future prospects. In this conference, topics about integrating indoor air quality, energy efficiency in buildings, Combined Cooling and Power System (CCP) and refrigerant were covered.

Being a student, it was an unforgettable experience to participate in such a great conference. The Energy Efficiency Championship gave us so much fun and also refreshed our minds about energy efficiency. Through attending technical seminars, we can acquire new knowledge about current developments and technologies. Furthermore, the Indonesian Chapter prepared us a great trip to Thousand Island, where we can relax and play water games! We really appreciate the arrangement of the conference.



DAY 5

CRC: ENERGY EFFICIENCY CHAMPIONSHIP

At the beginning, all of the participants were divided into many groups and the group consisted of different nationalities including Filipino, Taiwanese, Singaporean and Indonesian. Apart from knowing each other in this championship, the games also taught us a lot. The championship consisted of five games. Because of the time limit, some of us could only play four.



The first game required us to guess the number (answer) of the questions. All the questions were closely related to green issues and were those we always ignore in our studies.

Another game was categorizing rubbish. It may be a simple task for us because recycling bins are very common in Hong Kong. However, most of us didn't know that plastic strips are recyclable! We understood more about recycling in this game so we won't create troubles to the recyclers as we throw the rubbish.

The third game was to design a green building using raw materials. The most important idea of this game was that we can build up a sense of renewable energy and its flexibility in housing. Also, we were proud of our own design in this game.



The fourth game was word guessing. One member wore a helmet with words on it and asked questions so to guess the words. This game was more difficult than our expectation because we couldn't provide any hints to that member, but only answer yes or no.

The last one was the puzzle game. One of our teammates had to be the chess and answer questions when stepped on special squares. If the answers were correct, we could either stay or go forwards. However, if the answers were wrong, we had to go backwards.

All those games allowed us to learn more about the energy efficiency and provided an unforgettable memory for us to work with different nationalities.

CRC: TECHNICAL SEMINARS

We attended a total of three seminars that afternoon. We all absorbed a lot of new knowledge about HVAC&R technology.

Energy Efficient RAC Tehnology



This seminar was presented by Mr. Soufyan M. Noerbambang from the Indonesia Chapter. He mentioned about how the energy efficiency measures were increasingly adopted by major industrial, commercial and public sector consumers.

The Guidelines was developed to provide information on energy efficient building design in Indonesia based on international practices within the Indonesian physical, social and economic climate. It specifically targets the major role players in the development of any building: firstly, the building owner or developer as overall project driver and decision maker; and secondly, the consultants as designers and implementers of their ideas.

Besides, Mr. Hajime Yabase from Japan introduced us about the advantageous of absorption chiller as well as the performance comparing to other chillers. After that, Prof. Kiyoshi Saito from Waseda University, Japan showed us the latest simulation technology for the evaluation of HVAC&R systems.

This seminar revealed many practices and the latest technologies of the industry which enriched and consolidated our knowledge on HVAC&R. Also, we were inspired by the engineers of how they strive to achieve better energy sustainability by ongoing technological innovations.

DAY 5

CRC: TECHNICAL SEMINARS

Green Building

The seminar on applying energy efficient technology in green buildings was presented by Ir Rana Yusuf Nasir, the past president of ASHRAE Indonesian Chapter.

To be a green building, there are different kinds of challenge in the design. One important part is the high performance building approach. It can be divided into active design and passive design. For instance, high efficient AC plant system or high efficient lighting can be used for active design and efficient façade or natural daylight can be used for passive design. Using these designs may help the building save more energy.

Besides, modulation for efficiency in air conditioning is another topic that engineers should focus on. As the ambient temperature changes from time to time, air conditioning system needs to adjust cooling capacity to match the load. Modulation is very important for this. There are different devices to help match the load, for example, PIBCV, inverter and turbocor.

The methods and technology shared in this seminar would be a good reference for engineers to design a qualified green building.

HCFC Phase Out Management Plan in Indonesia

Hydrochlorofluorocarbons (HCFC), is an organic compound used as refrigerants. One of the most representative HCFC is R-22. However, in around 1970s, it was found that ozone layer was damaged by HCFC. Therefore, strict regulations have been launched around the world to replace R-22 with safer products. Unfortunately, the replacing process is slow. Many countries are still trying to phase them out. Indonesia is one of them.

In the seminar, HCFC phase out management plan in Indonesia was introduced. There was a deep examination of each refrigerants' thermodynamic property and flame propagation to seek for a suitable alternative refrigerant.

Based on the data and considerations of their plan, they made the following conclusion. The system pressure ratio is very close but R-32 system is higher by 1% than R-410A system. Moreover, during Isentropic Compression in Nominal Cooling Condition, R-32 discharge is higher than R-410's and R-22's. Furthermore, R-32's volumetric cooling capacity is up to 11% higher than R-410A. Hence, R-32 properties are positive for system efficiency and capacity but discharge line temperature needs to be controlled.

Additionally, it is found that vapor solution is an effective solution for improved performance in cooling systems.

DAY 5

CRC: BANQUET DINNER

During this banquet dinner, all the student branches have to perform related to their country on stage for which all of us had been prepared before the study tour.



For us Hong Kong Chapter, we had prepared to sing two meaningful songs. The first one was 'Song of Ages' (歲月如歌) which expresses the idea of treasuring the time and pursuing the dreams in our life even though we are facing obstacles. The second song was 'Sail On' (同舟之情) which is about the Hong Kong Spirit, hardworking, "Lion Rock Spirit" and spreading positive energy to people.

On the other hands, other student branches also had interesting and exciting performances, for example the Philippine Chapter performed a drama with dance and music which was the best performance throughout the night and cheered by all the participants. Indonesia Chapter, the sponsor of this year's CRC, also gave a great musical performance which made use of their traditional musical instruments.



This was an impressive and interesting banquet dinner for us.

DAY 6

CRC: THOUSAND ISLAND

Thousand Island was the last place that we visited. It took about 2 hours to arrive there by boat. It was very nice on the boat because the salty smell and the mild sea wind could never be found in Hong Kong.

Upon arriving the island, we were all impressed by the wonderful landscape and the water activities.

It was extremely beautiful. The sea water was really clean. The bottom of the sea could be seen easily above the water. Also, we discovered a very nice scenery on that island. That was when sunlight struck the sea water surface, a silvery light reflection appeared and it looked like that there were countless diamonds over the sea. What's more, the water activities were so exciting that almost all participants were having fun and cheering during the game.



CELEBRATION DINNER



After we went to a beautiful beach, we took the shuttle bus from the pier back to the Pullman Hotel. After having dinner for 4 days in Central Park, we were going to have dinner in a Chinese restaurant with the Taiwan Chapter and the Malaysia Chapter in Mall Taman Angrek. It was organized by the committees of all these chapters. We were so surprised and looking forward to it.



When we arrived, the committee members were all welcoming us. They said they had waited for 2 hours, so they had drunk a lot already. This was our first Chinese meal in Indonesia. We missed Chinese food at all. The restaurant was beautiful and the decoration was nice. We occupied three tables in total. Some of us sat with students from other chapters. We felt like Taiwan and Malaysia Chapters were closer to us because we had a common language. The committees were so kind, everything was ready for us. After we sat down, we picked up our chopsticks

immediately as we were all very hungry. We had tofu, shrimps, beef, vegetables and fried rice. During the meal, we took many photos with the committee members. The meal was delicious and it was really fun to have dinner with these people.

OTHER

CENTRAL PARK MALL



Central Park, located in West Jakarta, is a mixed-use complex including a mega shopping mall, an office tower, three apartments and a five-star hotel. It is a spectacular landmark which was grandly opened in September 2009. Adjacent to Pullman Jakarta Hotel, the shopping mall is a leisure destination which provides both shopping, dining and entertainment to local residence as well as travellers. According to the official website, the Central Park Mall was awarded by many International Organizations such as World Architecture Festival Awards 2011, ICSC-Asia Pacific Shopping Center Awards 2011 and Asia Pacific Property Awards 2012.

In the mall, there is a large food court which provides various Indonesian dishes, we can enjoy different Indonesian food at a low price. Apart from the food court, there are also a number of restaurants providing international delicacies including Chinese, Japanese, Korean as well as Western food. We all had delicious dinners in Central Park Mall.

Apart from the wonderful appetite journey, we also enjoyed shopping inside the Central Park Mall since it has thousands of tenants providing a wide range of choices. We bought many famous Indonesian foods such as shrimp crackers, instant noodles as souvenirs. Central Park Mall gave a lot of convenience to all of us during this study tour.

OTHER

INDONESIAN FOOD AND CULTURE

Indonesia is located in the tropic area. The staple food of the residents are rice, corn or potatoes. If you visit there, you won't see any food with pork because the vast majority of Indonesians are Muslims. Also, Indonesians like to put all kinds of spices, peppers, onions, ginger and garlic in their dishes. Some commonly seen are shown below.



'Sate' is mixed beef and mutton. Indonesians cut fresh beef and mutton into small pieces, soak them in sauce and then roast.



'Denden' is made with beef. Indonesians cut fresh beef into thin slices, then coat them with soy sauce mixed with spices and seasoning and then keep dried. It is deep fried before eating and it tastes wonderful.



'Curry' is a normal Indonesia dish. It usually includes rice and chicken.

Apart from food, Indonesian culture is also very unique and special.

Etiquette

Traditional etiquette for greeting is to put the right hand on the chest and say hello. You must take off your shoes and wear clothes that can cover the whole body when entering temples.

Faith

Most people believe in Islam in Indonesia.

Table Manners

Many westernized Indonesians eat with spoons and forks, but more traditional families eat with their hands. They think that eat with hand is very appetizing. However, tradition dictates that the right hand must be used for eating instead of the left, as the left hand is considered unclean.

A series of light grey dotted lines are scattered across the page. One line starts on the left and curves upwards towards the right. Another line starts on the right and curves downwards towards the left. A third line is horizontal and spans across the top of the page.

PARTICIPANTS' REFLECTIONS

Let's hear what we have to say after
this valuable tour!

It was lucky for me to join the Indonesia Study Tour 2013. This exchange program was held between 26 August and 1 September in Jakarta, Indonesia. In Jakarta, we lived in Hotel Benian Bulevar. Their main lobby was luxurious but the twin room was too small for us, three people. But to me, I think it was a good and special experience. On day 2, we visited the University of Indonesia Campus in Depok in the morning. The most unforgettable place was the laboratory because it was very similar to our laboratory in Hong Kong. It made me feel that I was in Hong Kong. In the afternoon, we visited Taman Mini Indonesia Indah (Indonesia Miniature Park) to know more about this country. However, time was limited and we could only visit a little part of it. I felt depressed about this. On day 3, it took us too long to visit Bandung (POLBAN and ITB), which made me feel tired until we saw a lunch box on every table. Then, I became energetic again. To conclude, I learnt a lot in Indonesia. Thank you ASHRAE Hong Kong Chapter!

CHOI On Ki, Angela (HKU)



It was the first time for me to join the ASHRAE study tour and the CRC program. I got an unforgettable experience in this seven-day journey. In the first part of the study tour, we had some sightseeing activities in Jakarta and Bandung which allowed us to learn more about the history and traditional culture as well as enjoy the spectacular scenery of Indonesia. Besides, we visited some universities in Indonesia to have academic exchange with Indonesian students. I learnt a lot from the sharings by the local students. The second part of the study tour was the student programs of CRC. During the activities of the program, we met a lot of new friends from different countries such as Indonesia, Malaysia and Taiwan. The banquet dinner was impressive to me. In the dinner, I enjoyed the fantastic performances from the student in different countries. We had a great time to chat and photo-taking with each other. All of us had a wonderful moment in the banquet dinner. To me, it was the happiest study tour that I have joined, I hope I can join the same study tour next year in Taiwan!

HO Ka Ming, Ben (CityU)





This study tour provided an unforgettable and meaningful end for my summer holiday. At the beginning, I had no ideas about Indonesia. I didn't know about the life of Indonesians, the newly developed green facilities and even the capital city, Jakarta. In this 7-day trip, we went to different universities and places. I felt amazed and surprised in what I saw. Initially, I thought Indonesia was an undeveloped country and the city would look like a rural village. However, what I saw was much different. It was just like the urban area in Hong Kong. The green buildings impressed me most. This study tour provided a chance for me to know the real face of Indonesia and the development of this country. I will treasure this special trip!

MAK Tsz Chung, Edmond (HKU)

I never thought that Indonesia can be so good. It is because a lot of people do not understand the world has been changing so quickly. There is no one country like to stop the step to develop. If you still think Indonesia is not good, I highly recommend you to go to there. Through this study tour, it help me to understand what is this developing country. In this study tour, we visited some universities. The students from University of Indonesia could speak English very fluently so we can communicate with each other easily. We also visit the laboratories. I found that they studied the foreign machines. If we said something new about the technology, they were very interested in it. It showed that they like to learn and are hard-working. I also felt surprised there were big shopping malls and hotels. The hotels and shopping malls are quite similar to Hong Kong. The class of the shopping mall and hotel also was so high as the class A. It means this country also can build the high class building. It was very different of my old and fall behind image. On the last day, we took a trip to the Thousand Island. I finally found the 'dark side' of the city. We needed to pass through a fish market to take the boat. The fish market was very dirty and had a layer of black water on the floor. There was also some pungent smel. The boat was very old. People can only sit on the floor. These have to be improved. This study tour let me see a lot. It let me see what Indonesia looks like and let me live with the others and communicate with them. It was a very good experience for me to build something and mind the balance of developing. I will never forget this study tour.



LEUNG Pang Tim, Tim (HKU)

This 7-

day study tour is so unforgettable.

It was my first time to join the ASHRAE study tour.

I feel lucky being one of the participants in this year as I earned much during this tour. Apart from those experiences on food and views in Indonesia. I also understood the local development of HVAC system.

Besides, we attended technical seminars and site visits in Indonesia. The technical seminars were related to thermal comfort and green building. It is really a hot topic. We should use more advance technology to reduce the energy consumption in the building.

Furthermore, education is one of the criteria for energy saving.

We also visited the green campus and scientia business park.

I learnt so much about building service, especially the green building and building environmental design.

Moreover, I had the chance to participate in the CRC and met friends from many countries like Philippines, Malaysia, Taiwan and Indonesia. We chatted and played together. It was a memorable experience to me. This allowed me to understand different cultures and backgrounds.

Finally, I want to give thanks to all of the persons who put effort to prepare and organize a colorful and bright study tour.

KANKA Chun, Ego (IVE)



My first
impression on Indonesia

before I went there is hot, wet and crowded.

Once I arrived in Indonesia, the weather was very good and the temperature was acceptable. The local was very nice to us. When we had some questions, they were all very helpful in answering our questions. The environment was very similar to HK. There were large and luxury shopping malls, hotels and busy transportation. However, one thing I did not get used to was the value of Indonesian Rupiah. The value of Indonesian Rupiah was very large and every time when we spent our money, we needed to calculate by ourselves, comparing the value to HK dollar.

The whole trip was meaningful, including exchanges with the local student, sightseeing in Indonesia. I learnt a lot about the culture in Indonesia. Although the whole trip only last for 7 days, I can find a lot of great memories during this trip. I

hope that I can visit Indonesia again and enjoy it for a longer time.

WONG Chi Pan, Harry (HKU)



The
Indonesia Study Tour 2013 was
my second time visiting countries in region XIII as
I was able to join ASHRAE's Chapters Regional Conference in
Jakarta. 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 student programs and visits which were supported
by the student branches of Indonesia Chapter. In these programs, we visited the top universi-
ties and institutes in Indonesia so we can meet the local students and having academic exchanges
together. I have known more about the learning environment here in Indonesia.

Besides, our tour advisor, Dr. Sam Hui, have arranged a few technical visits to some new green building
projects including commercial buildings and a business school. The engineers introduced us the criteria
of green building certifications and the latest technologies involved in the design.

Moreover, I was impressed by the beauty of this country when we travelled to Thousand Island, a remote
small island with wonderful beaches and clear water. We had the chance to enjoy exciting water sports and
had fun with the others.

I would like to give my appreciation to the Indonesia Student Branch for their warm welcoming in the
study tour as they provided strong support and did their best to show us the greatness of Indone-
sia 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.

GO Ho Fai, Harvey (IVE)



I am
pleased to have the chance of joining
the Indonesia Study Tour 2013. It was a valuable experi-
ence to meet students from around the world. Thanks to the en-
thusiastic Indonesian students and other ASHRAE members, we all
got a good learning and travel experience. We got along with the local
people, visited the AC plant, walked into the museum, and travelled
to every famous street and road. 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.

WONG Tsz Yan, Margaret (CityU)



In this Indonesia study tour, I had a chance to attend the conference organized by ASHRAE and carry out the technical and academic visits and cultural exchange in Indonesia. Thanks to ASHRAE, I could meet many young engineers coming from different countries, such as Thailand, Taiwan, Malaysia, Philippines and Indonesia. Those students were smart and nice. They were willing to share their experiences in studying in their own countries. The most unforgettable thing was the second day of the Chapters Regional Conference. We went to the Thousands Island. Every student could play the water sports games. Those water sports games were very exciting and we made a lot of friend eventually. As a Hong Kong student, I found that our education is just textbook and examination about theories. In Indonesia, they are not just focusing on theories. They will also focus on the practical work. For example, there were more than 5 vehicle engines in their laboratory. The students can be familiar with those engines by disassembling them. After going to this Indonesia study tour, I have learnt a lot and realized much more about Indonesia. I am looking forward to going to Taiwan where the next ASHRAE Region Chapters Regional Conference will take place next year.

LAW Ka Ho, Jacky (HKU)

This study tour was a good chance for me to know more people from different countries, including Taiwan, Thailand, Philippines, Malaysia, Indonesia and Singapore, which are also interested in engineering and participate in the Chapters Regional Conference(CRC) of ASHRAE. It was a great exchange experience for me in both cultural and technical knowledge.

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.

This experience changed my mind about an exchange tour or a study tour. In the past, I thought such tour would be boring and learning-oriented. But after this tour, I found that we can have an amazing process of building up friendship, culture and knowledge exchange and tour planning skills before the tour which can not found in common tours.

I will join the ASHRAE's activities and study tour in the future as possible as I can because I have a nice experience in this tour. I think it was a worthy experience and tour for me.



CHEUNG Wai Pan, Ben (IVE)

YEI Tak Hay Jerry (HKU)

This is one of the most meaningful journeys I have ever had in my life. To every country, what I really want to achieve is to know the true life in that country, instead of just hanging around in the shopping malls or tourist spots. I had a great chance to have lunch with some locals and could talk throughout the lunch-period, therefore I could ask about the local life. This is not a piece of information in the textbook and this is the thing that I want. Apart from this, I have tried some new things that I have no courage to do in Hong Kong. I had my first time jumping down from a bridge to the sea. Although this was just 5-metre tall, I defeated my own fear to height for the first time.

In the trip, not surprisingly I could make friends with people from other countries. What I think is the most important is that I could really taste and experience the world.

Chances are limited, and so I will treasure all of it. Definitely, this trip is one of the special moments that I will savor.



This Indonesia study tour was amazing. When I applied this tour, I did not know anyone yet and I did not even know what ASHRAE was. I just wanted to go to a trip in summer time. Before the trip, we had several meetings to make our tour t-shirt and practice our performance. During the trip, I met a lot of friends from different countries including Singapore, Malaysia, Taiwan, Philippines, Indonesia, Thailand and Hong Kong. Everyone was nice and friendly. We talked and I found that different countries have different cultures. Not only the official activities, had we also meet each other at night to know more about each other. After all, we exchanged our contact. Every day in Indonesia was great. The most memorable day was in Thousand Island. We had water sports. It only costed HKD 30. We also jumped off the bridge. The Indonesians asked me to join them. I thought it was about 5m high and I was afraid for the first time. Afterwards,

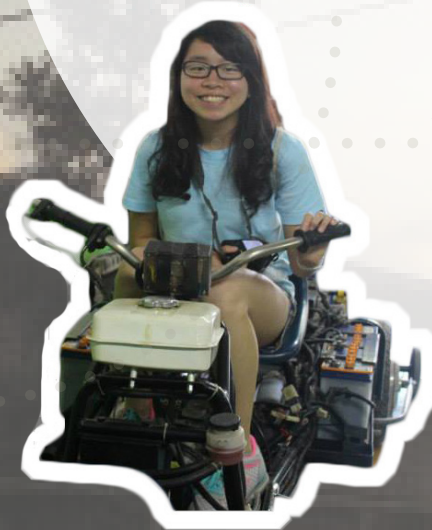
I thought it was exciting. I hope I can join the study tour next year in Taiwan.

LEUNG King Ki, Kenny (IVE)



Taking part in study tour was fun and I got the chance to join such a great event again. The arrangement by ASHRAE and local students from Indonesia was organized and finally resulted in a warm-hearted trip. The 7-day trip consisted of technical visits, cultural exchanges and student programmes as well which was a great chance for exploring Indonesia culture and engineering education.

Technical visiting was included in the tour besides of sightseeing. The modern structure and green buildings we visited in the Indonesia were fabulous. The development of green industry among engineering aspect is getting trendy. The long-term development of environmental sustainability is main special feature of building especially HAVC system and visual design is constantly balanced with the efficiency of a functional system. Modern and commercial buildings are placed around the city and environmental conscience is built with minor policies and public education. Apart from technical visits, cultural exchanges with students and members from different chapters were the highlight of the trip, especially the student program of the Ashrae Region 16th Chapters Regional Conference. Energy efficiency championship was the main theme of student programme. Students from different backgrounds were divided into various teams to have fun through games and visit. Everyone was devoted and we combined different regional cultures. Enthusiastic local students from Indonesia Chapter were well-prepared and the arrangement of traffic and sight-seeing activities were well organized. Last but not least, I want to show my special thanks to people who were involved in the preparation of study tour especially Indonesia Chapter and the committees from Hong Kong Chapter. Without their contribution, well-prepared schedule and arrangement would not be made. Enthusiastic welcoming and warm-hearted preparation from Indonesia Chapter was an unforgettable experience, thanks for their understanding and caring.



CHUNG Mei Ying, Jennifer (IWE)

I have learnt a lot of things in this trip. Before the trip, we had to prepare booklets, banner and souvenirs in order to let the students in other countries to know more about us. Since the students in this study tour came from different schools, we shared our ideas by preparing such things. I was impressed by the University of Indonesia. It was hard to imagine how big this school can be. Also, we had a chance to share the feelings about tour life and knowledge in the books with the local students. They were nice and told me a lot about what they learnt in the university. I really appreciated their attitude towards learning. Furthermore, we visited many hot spots like Indonesia Miniature Park and Thousands Island and many photos have been taken. We also broadened our horizons by the introduction of Green Campus Project and Scientia Business Park Project. Not only just the lecture in the classroom, we also visited the site. During the week in Indonesia, I have made a lot of friends and knew more about this country. In one word, it was a wonderful trip.



LAU Ka Keung, Kelvin (HKU)

The Indonesia study tour was an unforgettable experience for me. In the 7-day study tour, I learnt the different culture between Hong Kong and Indonesia. In Hong Kong, we can eat different kinds of food. However, we only ate chicken and some Indonesian dessert in Indonesia. Although I did not like it, it helped me to understand more about the culture of Indonesia.

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

After the Indonesia study tour, I have changed my views on HVAC engineering. In the past, I just focus on air conditioning. However, they may focus on refrigeration in Indonesia. It is really a wonderful memory for me.

Leung Pan Chak, Jimmy (CityU)



Apart from experiencing the Indonesian culture, I also made many friends from different places in Asia. Certainly, I gained a lot of knowledge on building service too. After the trip, I know more about Indonesia.

The first characteristic I observed was the low working efficiency of Indonesian. When we arrived in Jakarta, we waited in the airport for at least half an hour to get our luggage. It would be totally unacceptable in Hong Kong but was very common in Indonesia. Besides, their food was unforgettable. They were usually spicy and small in serving size. We always felt hungry even though we had just finished our meal.

In fact, I also learnt more about other countries too. It was because there were students from other Asian countries. I found that different countries have different accents. Sometimes, it was hard for me to hear what they said. However, it could not stop our communication. Regardless of Hong Kong students or students from other countries, all of us were having fun while joining the CRC. At the end of the tour, we became friends too.

All the special experiences I mentioned above impressed me. I am so glad that I had this chance to widen my horizons.

LAI Wing Man, Lemon (CityU)



I rejoiced to participate in this Indonesia study tour because this was my first time to join the tour. I learnt more about different types of HVAC techniques in all the universities and sightseeing. On the first day I arrived in Jakarta and I could feel the pace of life was more relaxed and they did everything slowly in Indonesia, where Hong Kong people can slow down and enjoy their lives. Most Indonesians were very nice so I communicated with them easily. Even I met people who can't speak English, we could use our body language to fix the problem.

Also, the Indonesian food was so spicy but it was delicious. I awfully liked the sate which was a roll with mixed beef and dipped with spicy peanut butter to eat. I loved some snacks and drinks because they were so colorful.

On Wednesday, We visited Bandung for the whole day. I felt surprised to go to Tangbukan Parahu. It was an extinct volcano. You can see Coniferous forest along the way. It was amazing. You would feel cold because the weather of Bandung is cooler than Jakarta. When you visit there, you need to bring more clothes. We arrived the entrance and smelt sulfur. We saw the beautiful views and many visitors and vendors. In that moment, I actually didn't want to leave this town.

On 30 and 31 of August, we had many things to do. We had a championship, a banquet dinner and the day trip to Thousands Island. We grouped with other students to participate in the championship. My teammate came from Philippines, Malaysia and Taiwan. We made friends through games and this brought us all into harmony. Finally my team were the 2nd runner up. At the dinner, I felt nervous to appear on the stage because we need to perform and other performers were marvelous. For the day trip, we went to the Thousands Island by ship but I got sick so I only had little memory. There was a pretty beach and many water sports you can play. It was suitable for travellers. Thanks to the Indonesia Student Branch to prepare all the things and take care all of us. We had a nice study tour this year!



CHEUNG Kit Yi, Kit (IVE)

What impressed me most in this tour was the scenery especially the Mount Tangkuban Perahu in Bandung. Once I reached the mountaintop I was instantly amazed by the breathtaking view! It was really worth to travel all the way from Jakarta for 4 hours to get there. I would definitely go there again in the future!

Another activity I like is the trip to Thousand Island. Many were so into the water activities. While I sat in a shop enjoying the food, the breeze and taking photos of the view. Such a comfortable place to spend the day!

I would like to use an Indonesian phrase that we spoke the most there, Terima kasih! Thank you to everyone who made this study tour possible and meaningful.



LO Wai Sin, Pang (HKU)



Before this trip, I never thought Indonesia Study Tour would be unforgettable and meaningful. We went to lots of places. All that increased my knowledge of Indonesia culture and green building development. Visiting University of Indonesia on day two inspired me. The size of it and the library were perfect for students. I was very happy to see volcano in Bandung. The rest three days in Indonesia provided a great opportunity for us to meet students, engineers, experts and professors. They didn't mind to share their experiences on the industry and thoughts about technology to us. It inspired me a lot. Also, I am pleased to make lots of friends from different countries in the energy efficiency championship. Thousand Island was the most beautiful beach I have ever seen. We enjoyed spending time on Thousand Island. Finally, I appreciate the Indonesia Student Branch for everything they did. I have lots of unforgettable memories in this programme. I hope to meet them again in CRC next year in Taiwan!

Last but not least, I would like to thank ASHRAE Hong Kong Chapter for giving me an opportunity to join this study tour.

WONG Ka Yung, Darren (IVE)

I think this study tour was great. I feel honored that I could join this tour. This is because it provided a chance for me to visit the university equipments such as the cold storage equipment and its applications. It was a good experience. Also, I met many friends in this trip. They came from different countries. And I really appreciate the Indonesian students. It is because they treated us very well. I totally feel their passion. After this tour, I think Indonesia is a nice country because of the nice weather, landscape and the friendly friends form there. If there is one more chance allowing me to visit Indonesia, I would definitely go there again!



WONG Yu San, Sammuell (CityU)

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GALLERY

A small decorative graphic consisting of a few light gray dots on the left side of the page.

Check out our group shots throughout
the tour!



Day 1 Hong Kong International Airport



Day 2 University of Indonesia, Faculty of Engineering



Day 2 University of Indonesia, with students from ASHRAE student branch



Day 2 Taman Mini Indonesia Indah (Indonesia Miniature Park)



Day 3 Politeknik Negeri Bandung (POLBAN), with ASHRAE POLBAN student branch



Day 3 Tangkuban Parahu Volcano, with ASHRAE POLBAN student branch



Day 4 Technical visit: Green Campus Project



Day 4 Technical visit: Scientia Business Park



Day 5 CRC banquet dinner, HK Chapter



Day 5 CRC banquet dinner, HK Chapter and ASHRAE president



Day 5 CRC banquet dinner, HK Chapter and Taiwan Chapter



Day 5 CRC banquet dinner, HK Chapter and Philippine Chapter



Day 5 CRC banquet dinner, HK Chapter, Malaysia Chapter and Philippine Chapter



Day 6 Thousand Islands



Day 6 Celebration dinner, HK Chapter



Day 6 Soekarno–Hatta International Airport, Jakarta, Indonesia



ASHRAE CityU Student Branch
ASHRAE HKU Student Branch
Jointly organized by: ASHRAE HKUST Student Branch
ASHRAE IVE Student Branch
ASHRAE PolyU Student Branch

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