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50th Anniversary Commemorative Magazine



Public Interest Incorporated Association

**Kinki Chapter of The Society of Heating,
Air-Conditioning and Sanitary Engineers of Japan**

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In Commemoration of 50 years of the Kinki Chapter



Kazunobu Sagara

Chapter Chief
Kinki Chapter, The Society of Heating,
Air-Conditioning and Sanitary Engineers of Japan

Congratulations on the 50th anniversary of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan.

The Kinki Chapter was established in April 1963, the year in which the Sanitary Contractors Association changed its name to the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan. I would like to offer my heartfelt thanks to successive officers, including Chapter Chiefs, who have supported our lively chapter activities for 50 years.

Please forgive me for being personal, but it was in 2003, just the 40th commemorative year of the Kinki Chapter, that I came back here after leaving Kansai where I grew up and spent my school years and working in the Chubu Chapter area for 30 years. It has been exactly 10 years since then, and meanwhile, everybody has been doing his/her best to seriously push on toward the energy saving and reduction of greenhouse gases due partly to the Kyoto Protocol which took effect in 2005 by Russian ratification. However, we were almost about to fail the mission to decrease the green house emission by 6% vs. the benchmark year despite our state-of-the-art technologies and sincere efforts when 2008 Lehman's fall occurred, which dramatically decreased the emissions of our country. Thanks to this, we managed to achieve our emissions target taking into consideration forest sink and Kyoto Mechanism. And there came the Great East Japan Earthquake in March 2011. Though there was almost no damage in Kansai area, it brought about a situation where a high level of energy saving that nobody had ever expected was required due to the nuclear disaster in Fukushima. Furthermore, the LDP regained the power and the Abenomics was launched for economic reform, which caused then underperforming stock prices to move up to the highest since the Lehman's fall. We could say our organization's social mission will become even more important if the country achieves economic recovery and, as a result, the trend toward energy conservation comes to naught.

As you know, the Society of Heating, Air-Conditioning and

Sanitary Engineers of Japan converted to a Public Interest Incorporated Association in April last year. The chapter operation, which used to be conducted on our own, became subject to decisions of the Administrative Board after the transition with an acting committee under the Chapter Chief, who is also an administration officer for the Chapter. As for funds also, we do not receive chapter subsidies any more, which was the resource for our activities, and we are to execute the budget allocated by the Headquarters based on the Chapter's annual plans according to the accounting standards of Public Service Corporation. In reality, however, it seems that we can carry out the same activities as before by making the next year's business plan and budget ahead of time, so we are glad we will be able to run the Chapter maintaining good parts of our tradition.

As for activities to mark our 50th anniversary, we are compiling the "Progress" and "Technical History" of the Kinki Chapter, and a memorial symposium and an anniversary event are planned in fall after a cross cultural event. These events will be easily participated in, and we would appreciate your cooperation.



Shinsuke Kato

President
The Society of Heating, Air-Conditioning and Sanitary
Engineers of Japan

I would like to convey my congratulation on the occasion of 50th anniversary of the Kinki Chapter.

Firstly, I would like to pay my respects and appreciation to those who worked for the establishment of the Kinki Chapter, members who have succeeded and developed the activities of those days to the current state and successive Chapter Officers. The Kinki Chapter was established in April 1963. It was in May 1962 that our society was reorganized as the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan from the Sanitary Contractors Association to become a “pure society.” The Kinki Chapter was established as the first chapter within one year from the transformation of the Society both in name and reality and has been leading the chapter activities of the society since then. The Society, after reorganized as an engineering society from an industrial association, has concentrated its efforts on organizational restructuring and operation to switch our activities to those of an academic organization. Among many organizational restructurings and the activities started as a new society, there was the “establishment of chapters to deploy and settle our activities nationwide.” Based on this policy, chapters were established and their activities started in each area. Formation of the current 7-chapter organization started with the establishment of the Kinki Chapter in 1963. After that, Kyushu, Hokkaido, Chubu, Hoku-Shinetsu and Chugoku/Shikoku Chapters were established successively, and the Tohoku Chapter completed the process after 10 years. Being on the way to spectacular economic growth, our nation was in demand for air conditioning and sanitary systems along with the expansion of each industrial sector, while factors for such systems had all become available by then. It is well known among our members that excellent activities such as new development of study and technology concerning air-conditioning and sanitary systems as well as maintenance/accumulation of tradition have been carried out in the Kinki Chapter supported by related industries.

Now, the world has come to impose severe limitations on the use of energy and resources with a goal of realization of the sustainable society. Our future objective is to consume energy and resources only to the extent reusable. One may wonder it might significantly limit the “economic growth in the society;” however, realization of the society where everyone is rewarded if he/she tries hard enough is one of common earnest of human beings, and I believe the society which economically develops makes it possible. Economic growth means increase of values created each year. Realization of a society which always creates new values and technical innovation to create new values, while maintaining the use of resources and energy to the extent reusable, will be asked for. Such society does not increase the values by the use of materials and energy, but by technical and cultural growth.

In accordance with the “21 Century Vision” created last year by the Former President Mr. Yuzo Sakamoto, the Society is strategically striving to increase values of service and goods related to air-conditioning and sanitary engineering at the moment by enduring technical development with an aim to realize a sustainable society. We must open up a new frontier of the air-conditioning and sanitary sector to create new values. It can be said the development of a new frontier is an important mission given to the Society. I earnestly hope the Kinki Chapter will also be part of and even lead this activity in the future.

I would like to send my warm congratulations on the 50th year anniversary to the committee members and members of the Kinki Chapter and expect their continued activities. I would also like to confirm the social mission given to the Society and push hard to further develop it in cooperation with the chapter committee members and members.



Shuichi Hokoi

Former Chapter Chief
Kinki Chapter, The Society of Heating, Air-Conditioning and
Sanitary Engineers of Japan

Congratulations on the 50th anniversary. I would like to pay respect to successive officers who have opened up, expanded and driven forward the education and research activities in the air-conditioning and sanitary engineering area in Kinki region, industry, government and academia which have supported their activity and members who have been actively participated in Society's activities.

One big movement which has influenced the Heating, Air-Conditioning and Sanitary Engineers of Japan for the past 10 years is, as the Chief Mr. Sagara has mentioned, a trial to solve the environmental issues as well as energy supply issues caused by the Great East Japan Earthquake. During the last 2 years that I was the Chief, the biggest challenge for the Kinki Chapter was the conversion of the Society into a public interest incorporated association. I would say it was not only the Kinki Chapter, but the whole Society that faced this challenge and continued seeking the way to complete the mission. We succeeded in making a soft landing on a new organization in the end owing to the rigid chapter organization centering on the board (almost the same as the current Expansion Steering Committee), which was an precious asset the Kinki Chapter had accumulated.

Nevertheless, it is expected that it will be quite difficult to foresee the future from now on. Drastic social, economic and international changes as well as changes in evaluation criteria will occur, and we cannot just be comforted with our past asset. In commemoration of the 50th anniversary, "Progress" and "History of Technology" were compiled by the 50th Commemoration Committee headed by Prof. Moriyama to summarize the activities of the Kinki Chapter for the past 10 years. It makes us realize again that, by tracing back the footsteps of the Chapter, steady accumulation of core technology is surely important and will also be a dependable compass for our future, though it largely depends on our attitudes whether or not we can discover new things by learning from the past.

I was given an assignment from the former Chapter Chief Mr. Nakao when I was appointed as the new Chief. He told me to curb the decline of, and even increase, the number of members. It is an especially important issue to increase the number of younger members who will play key roles in the future, but I could not complete the assignment unfortunately due partly to changes in social situation with a huge trend away from societies. I, however, established a "Members Committee" in the Chapter in order to communicate the Society-related information to the community and increase the number of members. The committee just started its activity in a close cooperation and coordination with related societies and associations such as the Japan Building Mechanical and Electrical Engineers Association. Educational institutes, especially universities, have to make efforts to increase the number of students who wish to study in the area of air-conditioning and sanitary engineering, who will become members of our Society in the future. The future looks bright because more students are interested in energy, global and living environment recently. Also the ratio of female students who study engineering, especially in architecture-related area and who are assigned to seminars related to architectural environmental engineering and technical building systems is increasing. It is expected there will be more female air-conditioning engineers in the future, but the air-conditioning and sanitary engineering area is not fully ready to accept them yet. I am sure fostering female engineers and getting ready immediately for accepting them will lead to the future development of our sector and the Kinki Chapter.

I would like to send my warm congratulations on the 50th year anniversary to the committee members and members of the Kinki Chapter and expect their continued activities. I would also like to confirm the social mission given to the Society and push hard to further develop it in cooperation with the chapter members and committee members.

Congratulatory Message on the 50th Anniversary of the Kinki Chapter



Yoichi Kobayashi

Chapter Chief, Kinki Chapter
The Japan Building Mechanical and Electrical Engineers
Association

Congratulations on the 50th anniversary of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan.

The year 1963, in which the Kinki Chapter was established as an active base for members of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan from public and private sectors living in 6 prefectures in Kinki area, was the beginning of the sharp economic growth waiting for the Tokyo Olympics and the opening of the Tokaido Shinkansen in the following year as well as the opening of the entire Meishin Expressway. Air-conditioning and sanitary operations also developed dramatically during the huge economic growth, and its importance was recognized after two oil shocks in 1973 and 1979 bringing focus onto energy saving.

Meanwhile, in 1996, the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan set up the "Environmental Engineering Study Group" which introduces new works and technologies and reports study results of universities according to specific themes five or six times a year. This group significantly contributes to the development and expansion of new technologies as a precious social hub for academic researchers and air-conditioning and sanitary engineers who are engaged in practical tasks. Having an experience as a committee member of the Division of Air-Conditioning of the Environmental Engineering Study Group, I was filled with deep emotions when I heard the meeting of the study group of March 8, 2013, was the 300th gathering of the group. I am grateful to the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan which has continued study meetings on useful themes.

Also since 1972, the Kinki Chapter of the Society has been holding Kinki Chapter Academic Annual Meetings, and this year's meeting marked the 42th gathering. This meeting has been making a significant contribution to the development of the sector as a place for the fourth-year undergraduate and graduate students to present their study results. I would say increase of practical engineers' presentations such as technical reports would stimulate

students more and also giving opportunities to practical engineers to know the study results at the universities, etc., would lead to further development and growth of new technologies.

The Kinki Chapter of the Japan Building Mechanical and Electrical Engineers Association was founded in 1990, one year later from the implementation of the system for building service architects and the establishment of the Japan Building Mechanical and Electrical Engineers Association. Since then, we have cooperated with the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan with the same secretariat, by holding general meetings and New Year's parties together and cosponsoring lecture courses.

Though the number of air-conditioning and sanitary engineers and members of the Kinki Chapter of the Society showed increase until mid-1990, they are taking a downward turn afterwards. However, as represented by the 3rd Conference of the Parties (COP3) of the United Nations Framework Convention on Climate Change, we will need to drastically reduce greenhouse gas emissions. The roles of air-conditioning and sanitary engineers have become more important due to uncertain vision of reduction of greenhouse gas emissions from energy sector such as nuclear plants.

We need to deal with a lot of new issues such as use of environmentally friendly energy, utilization of renewable energy, realization of ZEB (net Zero Energy Building) and energy management using ICT for prevention of global warming, smart community, facility design and environmental simulation using BIM, and BCP measures to prepare for major earthquakes. We would like to make efforts to foster younger engineers and advance air-conditioning and sanitary engineering technologies by alleviating the drop of the number of engineers and members making full use of characteristics of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan and the Japan Building Mechanical and Electrical Engineers Association in close cooperation. I look forward to a long and prosperous relationship.

Prof. Kyung-Hee Lee

Chief, Busan/Ulsan/Gyeongnam Chapter of the Society of Air-conditioning and Refrigerating Engineers of Korea

I would like to express my gratitude to the officers, including the Chief, of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan who have invited me here today.

It has already been two years since we visited Japan last time. We are feeling truly happy to hear on the news that much of the damages done to the nuclear plants in the Great East Japan Earthquake in 2011 has been restored with time.

The Busan/Ulsan/Gyeongnam Chapter of the Society of Air-conditioning and Refrigerating Engineers of Korea was established in August, 1990, and we now have more than 20-year old history with approximately 700 members.

This year also marks the 10th year of the exchange agreement between the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan and us. I would like to take this opportunity to show my sincere gratitude to Prof. Yamanaka who took part in our Chapter Meeting and academic presentations and gave splendid speeches in 2012.

Having entered the 2010s, many countries are actively promoting various studies in accordance with the agendas for global policy to find specific solutions for environmental and energy issues in order to respond to the climate changes. I believe the global environmental issues we are now facing will have to be solved mainly by the three nations which are leading South East Asia, i.e., Japan, Korea and China. And especially our societies, belonging to the facilities sector, will have to feel a strong sense of commitment to solve a lot of problems.

I hope the relationship as good partners based on the close cooperation and trust between the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan and the Busan/Ulsan/Gyeongnam Chapter of the Society of Air-conditioning and Refrigerating Engineers of Korea as leaders for solving global environmental issues will last long. Thank you.

Sincerely yours,

Prof. Guoliang Ding

President, The Shanghai Society of Refrigeration

The Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan was established in the earliest stage in Asia as an academic association concerning HVAC & R, and has made a significant contribution to heating, air conditioning and sanitary engineering for the past 50 years. It has also been highly appreciated by the international community. On behalf of the Shanghai Society of Refrigeration, I would like to congratulate on the 50th anniversary of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan.

The longstanding cooperative relationship between the Kinki Chapter of Society of Heating, Air-Conditioning and Sanitary Engineers of Japan and the Shanghai Society of Refrigeration began in the early 1980s when a group of delegates led by Prof. Narasaki of Osaka University from the Kinki Chapter visited us. A Two-Way Exchange Agreement was concluded in 2003, and the ties between two organizations grew. I would like to express my appreciation for the cooperation the Kinki Chapter has rendered to us.

I hope our interaction and cooperation will last and develop, producing further outcomes. I would also like to offer my best wishes for the continued success and growth of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan.

We are in the middle of the Chinese New Year (Chun Jie) and celebrating the most important holidays in the year. I hope we can share our happiness with you.

Yours Cordially.

Special Contributions

On the Occasion of the 50th anniversary

Masaya Narasaki

8th Chapter Chief, Kinki Chapter, The Society of Heating,
Air-Conditioning and Sanitary Engineers of Japan

Congratulations on the 50th anniversary of the Kinki Chapter.

Time goes by so fast, and I was thinking that it was just several years ago that I took part in the 30th commemorative activity of the Society. I am surprised that it has already been 20 years since then. In those days, the country was still charged up after the bubble boom, and the industry and universities had energy and liveliness waiting for the opening of the Kansai International Airport. In such situation, the 30th commemorative activity was extensively carried out with all efforts of the whole Chapter. For the 20 years after that, Japan's economy suffered from a prolonged period of slow growth, especially in Kansai. I pay respect to the Kinki Chapter which has actively been carrying out the society activity including study group meetings despite such severe condition.

It is unfortunate that the interaction with the Chinese Association of Refrigeration and Tongji University in Shanghai, which was promoted with assistance of the Chapter's International Exchange Foundation, has not shown much progress due partly to my understrength. With recent aggravated problems such as environment deterioration caused by global warming and wide-spread air pollution, now is the time the chapter of the Society act as intermediary to educate people on and develop technologies such as energy saving of buildings, gas emission reduction, air purification, etc., in corporation with China and other neighboring counties. I also believe this would be exactly the quickest way to foster a friendship with them.

I would conclude by wishing further development of the Kinki Chapter in the future.

Those Days in Showa Era

Takao Tsushima

11th Chapter Chief, Kinki Chapter, The Society of Heating,
Air-Conditioning and Sanitary Engineers of Japan

It was 50 years ago, on April 20th in 1963, in the midst of the high economic growth promoted by the Ikeda cabinet, that the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan was established. A spectacular ceremony was held in Taiko-en in Miyakojima-ku. In those days, the Faculty of Engineering of Osaka University was located in Miyakojima-ku, a 15-minute walk from JR Kyobashi Station, right across a big street from Taiko-en. The first Chapter Chief was Prof. Yasushi Niizu of the Department of Mechanical Engineering of the Faculty of Engineering of Osaka University. Prof. Niizu had established and had been leading the "Environmental Engineering Study Group," strongly advocating the importance of "environmental engineering" from the beginning. Several years later, Japan's first "department of environmental engineering" was set up in the Faculty of Engineering of Osaka University. Since then, a variety of engineering departments related to environment were set up with "environment" as a keyword such as marine environment, global environment, urban environment, biological environment, etc.

In this sense, the late 30s of Showa era can be called the dawn of "environmental engineering."

Celebrating the 50th Anniversary since the Establishment of the Kinki Chapter

Seishiro Ogame

Former Vice Chapter, Kinki Chapter Chief, The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

The Sanitary Contractors Association was an old establishment which published monthly magazines for technical guidance in the industry.

I joined the association in 1937, and, as you well know, the organization changed to a society called the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan (the “Society”) after the war.

The Osaka Plumbing Hall (the “Hall”) sponsored by the industry in Osaka was built in 1972. The Osaka Plumbing Equipment Study Group, which came into existence in 1951, became a corporate body, changing its name to Osaka Air-conditioning and Sanitary engineering Association (the “Association”). Its secretariat, which had been located in the Water Hall and the Hirano-cho Shinkine Building, moved into the Hall.

The secretariat of the Osaka Plumbing Cooperative Union, an industry group established for distributing iron and steel during the war, also moved into this Hall. And I recall that the Kinki Chapter of the Society also moved in at the same time. The first floor of the Hall had an entrance and a piloti (motor pool). The second floor had the Secretariat office and a large lecture room, which the Chapter of the Society and the Association made heavy use of, and an elevator hall between them. Large and small conference rooms were situated from 3rd to 6th floor, which we used for various meetings.

The position of the Chapter Chief was taken by Prof. Yasushi Niizu and Prof. Ryotaro Tanaka and succeeded by university professors. Being the President of the Association, I had an honor to be appointed the Vice Chief of the Chapter of the Society to help many Chiefs. Mr. Kazu Kaga, who had resigned the head of Building Facility Section of Osaka City, got a job with the secretariat of the Association. He attended the Board Meeting of the Society taking notes and communicated with the Society’s headquarters, etc. In other words, the Association supported the clerical work of the Kinki Chapter of the Society.

Saburo Aikawa

Former Adviser, Kinki Chapter, The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

I would like to congratulate most heartily on the 50th anniversary of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan. I recall there were extraordinary efforts of forerunners at its establishment. I am deeply grateful and pay respect to those who succeeded them for their activities leading to today’s development of the Kinki Chapter.

I wonder how those forerunners felt at the establishment of the Kinki Chapter. Japan was then in the midst of the rapid-growing economy, with increasing demand for air-conditioning and sanitary facilities along with expanding industrial sectors. Requests regarding such facilities also increased rapidly due to construction of superhigh-rise buildings and advanced production plants, etc., and technical improvement of the corresponding facilities-related sector and enhancement of the corresponding organization were particularly and urgently required.

The forerunners of the industry must have thought dealing with such situation by establishing a chapter of the Society with industry-university joint efforts was imperative.

The Plumbing Hall was built to assist a great deal the Society’s clerical work, councils, provision of forum for study groups, etc., dispatch of committee members and lecturers, financing, etc., efforts of which have become the driving force behind its current prosperity. Many chapters were successively established after the Kinki Chapter, too, and have also become thick pillars supporting the Society.

It is my sincere wish that the Society will progress toward the next 50 years based on these accomplishments.

Discussion in Commemorative of the 50th Anniversary of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

Trace back the history of the Kinki Chapter and discuss future issues and expectations



Prof. Harunori Yoshida (Chapter Chief from 2005-2006; Professor of Okayama University of Science)
Prof. Akikazu Kaga (Chapter Chief from 2007-2008; Professor Emeritus of Osaka University)
Prof. Masakazu Moriyama (Chapter Chief in 2009; Professor of Setsunan University)
Mr. Yuzo Yamada (Vice Chapter Chief from 2005-2006; Yasui Architects & Engineers, Inc.)
Mr. Yoshiyuki Tanohata (Vice Chapter Chief from 2007-2008; Takenaka Corporation)
Mr. Yoshio Gomachi (Vice Chapter Chief in 2009; Obayashi Real Estate Corporation)

<MC>Prof. Akira Kondo (Head of Publicity and Information Committee; Professor of Osaka University)
(Assistant MC) – Mr. Mitsuru Nishiyama (Vice Chapter Chief from 2011-2012; Taikisha Ltd.)

Self-Introduction



Kondo: Today we have here successive chiefs and vice chiefs of the Kinki Chapter of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan for the past 10 years. I would like you all to talk about the progress and the future direction of the Kinki Chapter based on your experiences as Chief or Vice Chief. First, will you introduce yourselves briefly?

Moriyama: Moriyama from Setsunan University. I became the Chapter Chief in 2009 after Prof. Kaga. I was then in Kobe University and moved to Setsunan University next year.

Yamada: Yamada from Yasui Architects & Engineers, Inc. I was the Vice Chapter Chief when Prof. Yoshida was the Chapter Chief seven to eight years ago, I recall. COP3 was held in 1997 and the commitment period of the Kyoto Protocol was between 2008 and 2012, and I was in the office at around the middle of it. I remember talking about it.

Gomachi: Gomachi from Obayashi Real Estate Corporation. I was temporarily transferred to Obayashi Real Estate Corporation in 2010. I was the Vice Chapter Chief when I was in Obayashi Corporation.



Tanohata: Tanohata from Takenaka Corporation. I was the Vice Chapter Chief when Prof. Kaga was the Chapter Chief. The biggest event then was moving the Kinki Chapter office. Most crucial matter was where and how to move the office from Nakatsu. I am still impressed to recall how smoothly we managed to move it to the current ATC office.



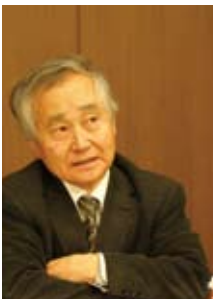
Kaga: I became the Chapter Chief after Prof. Yoshida. I was then in Osaka University. As Mr. Tanohata mentioned, the most unforgettable event was moving the office, and I would say it was the time when a drastic change occurred in the history of the Kinki Chapter. As another big event, the forth report

of IPPC (intergovernmental panel on climate change) was issued, and it made us realize the global warming issue was a real thing, though we had been doubtful until then.

Yoshida: Yoshida from Okayama University of Science. I was the Chapter Chief before Prof. Kaga. We had to think about what to do with the office of the Kinki Chapter, and I must have attacked verbally the people in the Chapter without knowing. We needed to consider drastic measures against reduced allocation from the Headquarters with less members and the same clerical and operating cost.

Memories and Topics from Chapter Activity

Kondo: Though you have mentioned what it was like when you were the Chapter Chief or the Vice Chapter Chief, would you please tell us about what you remember and topics from the days when you were the Chapter Chief or the Vice Chapter Chief in the chapter activities of the past 10 years.



Yoshida: I tried my best to activate the organization which had lasted for long time. I gave a mission to the organization to put out messages for two years for revitalization, and asked the committee members to make constructive and positive remarks.

I did not want to lose to Tokyo, and tried to energize Osaka. Rationalization of the organization was part of it, but lack of operating cost was also another reason for it. Also I recall the promotion award was inefficient until that stage. They hesitated to make requests, and I also asked for active applications from the Kinki Chapter collecting necessary information quickly.

Kaga: I was in the society activity from my earlier days, and at first worked as a member of the Library Committee, which was the predecessor of the current Publicity and Information Committee, purchasing books and society magazines and organizing them. Most of those books were disposed of when the office moved. The Secretariat Office

then located in Nakatsu had become almost like a salon with frequent visits of former members. The Secretariat turning to a salon surely had good aspects, but I also had an impression the office was somewhat stuffy. But such atmosphere changed when the office moved. I think moving the office drastically changed the Kinki Chapter.

Tanohata: I took over the position of the Vice Chapter Chief from Mr. Yamada, and I remember that cost reduction had been a big problem since before his time. Mr. Setogawa (then Kansai Electric Power) was in charge of lectures then, if I recall right, and in the course of business review, I remember we discussed and decided to keep income-producing lecturing operation for beginner and intermediate levels. We recruited participants to the lectures inviting supporting members to utilize the Society's workshops as part of those carried out within their companies. I am not sure it worked or not, but there were many attendants, no less than those of Headquarters, and I believe it was profitable. It continues to be the same even now and I think it was our great achievement. Besides that, what I remember most is moving the Secretariat/office. We spent more than one year on this matter. With Mr. Matsumura (The Kansai Electric Power Co., Inc.), I experienced a lot of things kicking around many issues considering if we should depend on the secretariat of an economic group or if we should invite specialists for bids, and so on. We also cooperated and discussed with the Japan Building Mechanical and Electrical Engineers Association. We discussed over and over the allocation to the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan and the Japan Building Mechanical and Electrical Engineers Association. I remember as if it were yesterday.



Moriyama: I was appointed the Chapter Chief when Mr. Tanohata was the Vice Chapter Chief, and I did not have that hard time since the office issue had been solved by Prof. Kaga and Mr. Tanohata. The office moved in June 2008, and the new system had already been established in 2009 when I took

over. There was not much trouble with the budget, either, since the operation was already going with the reduced budget. I am sorry that Prof. Nakao and I took the office for one year each because I was to resign Kobe University. Thinking back, I had a quite easy time compared to my predecessors who had gone through hard times.



Gomachi: I was in Tokyo for the first five years. Then I came back to Osaka and took over Mr. Tanohata's position. Frankly, I did not have much trouble since all problems had been solved by Mr. Tanohata by then. Officers' meetings and committee

meetings were being held at ATC, but we moved the venue to Osaka Ekimae Building No.2 as the burden of the preparation got bigger. Thanks to that, the percentage of participation increased and the activity itself was revitalized.

Moriyama: It was when I was the Chapter Chief that the Headquarters made policy that the Chapter Chief should also be a member of the board of directors in the new organization of public-service corporation. Our plan itself had not been that way until then. Prof. Sagara is to become the Chapter Chief from 2013, and they said he had to be a director as well, so we were forced to follow it. The Headquarters became difficult after we turned to a public-service corporation, but the operation of the Chapter started getting a little easier when the budget issue was solved to some extent.

Yamada: Prof. Yoshida said he did not want to lose to Tokyo. I was feeling the same at that time, and I guess it was probably because the Headquarters was too powerful. Another big event then was Prof. Yoshida's decision and execution of cost reduction. As for the problem with the Headquarters, the operation was too much centered on the Headquarters committees, but it was hard to change partly for the geographical reasons. Prof. Yoshida asked me about the subsidy and told me to go over it to see if it is given per head. I checked it up and found the subsidy was given in that way, but we, as member companies

of the Kinki Chapter, had a feeling that money we were providing for revitalization of the Chapter was going to the Headquarters. Thanks to Mr. Setogawa's positive efforts, costs were reduced significantly. I would say Prof. Kaga took over when a cost framework was made to some extent by Prof. Yoshida. Net earnings were never positive before then. But it started to break even, though too much surplus is not good.

Tanohata: Prof. Mizuno was the President (2004-2005) when I was a director of the Headquarters. I had an impression that with and because of the President's support who was also from Kansai area, directors from the Kinki Chapter were participating actively in the Headquarters meetings, etc.

Kondo: As for revitalization of the chapter activity, I have an impression that there have been quite a lot of academic study presentations recently. Has there been anything to trigger it?

Yoshida: A lot of efforts were made when I was the Chapter Chief. We tried to figure out what should be done to get a lot of contributions. We recruited and even changed the way of presentation. We added more categories to get themes related technical development from companies.

Kondo: Those seeds sowed at that time are producing flowers now. We use two rooms for presentations now, but we need more to accommodate all.

Tanohata: To increase participants, the operation was run delicately, avoiding holding the presentations on the same day as graduation work presentations and changing deadline of the manuscripts to put them on the society magazines, for example. I remember we succeeded the way of operation they had established. They had made changes to provide more opportunities for presentation.

Moriyama: We created many awards, too.

Yoshida: This framework we just talked about was



created by those who made a lot of efforts. I might have been saying whatever I wanted at that time. Presentations hosted by the Chapter were considered to be done by the people of universities, but I tried to strengthen the ties between the industry and universities and among people related to them. Since we work for the air-conditioning and sanitary industry, I wanted to make it a place where members who are engaged in design can also participate in.

Kondo: An employee from RIKEN of the next-generation super computer “Kei” made a presentation last year. Thanks partly to such presentation, I think our academic study presentations have come to be recognized to a great extent.

Kaga: Until the time when Prof. Yoshida was appointed the Chapter Chief, some kind of comfortable atmosphere prevailed in the Kinki Chapter. Customs were often followed, and we heard words we did not understand, but we followed them anyway. I was the Vice Chapter Chief under Mr. Yoshida, who was the Chapter Chief, and I had a feeling that things were quite different from before. But now it does not seem as comfortable as before. Things used to be more relaxed, and coffee was even served in the committee meetings. We had no idea what the staff of the Secretariat was doing, but were surprised when they wrote down everything they did when the office moved.

Tanohata: Yes, we asked them to list their tasks.

We also wanted to know in detail what chairpersons of committees were doing, and what they wanted us to do. I think the chairpersons were doing quite a lot of work in those days.

Technology Trends

Nishiyama: The material provided is the technical history of “buildings” and “products/systems” compiled for the 50th commemorative magazine, and you can see it is especially rich in context for the ten years from 2002- 2012. Energy has become a big issue now, and after 1997, in which the Kyoto Protocol was adopted at COP3, buildings with a system to grasp the whole building to utilize natural energy such as natural ventilation, instead of energy saving function of the product itself, are receiving high evaluation, which is different from the buildings until 1990s.

Also the Kinki Chapter has been constantly receiving three Technical Promotion Awards by the Society every year for the last several years, and you can tell from this it has been actively designing and constructing such buildings. Another characteristic is a large amount of air-conditioning systems that went on the market in 1990s, meaning multi-split type air-conditioning system such as air-to-air heat pumps and gas heat pumps started coming onto the market. Furthermore, energy saving technologies for an equipment itself advanced a great deal, and especially highly-efficient products using inverters such as centrifugal chillers appeared.

Kondo: Having heard the explanation of the technological changes, would you like to say something as companies, from the manufacturing side?



Yamada: I participated in the compilation of the 40th commemorative technical history ten years ago, and it is my impression that overall technical trends have not changed much from the 1990s. But it is true that quality performance

of each device has improved and that they have been downsized and decentralized. Looking at the list of the technical changes, I think they could have been described into more details. For example, a lot of new products were mainly related IT technology, but expression of IT performance should have been included more, rather than mechanical performance. It might be better if such aspect is provided more.

Gomachi: Energy saving combined with construction used to be addressed before also, but most of them dealt with mechanical energy saving. But one can say energy saving which matches construction have become widely spread now making good use of such technology for the last ten years. In addition to this, equipments such as centrifugal chillers have become dramatically efficient. They are used skillfully, including cooling system control, and I think the concept of energy saving has changed for the past ten year.

Tanohata: Remembering the 1990s and then looking at the 2000s, I would say the air-conditioning industry of the 1990s was in the transition from central system to multi-split system. In those days, the central system was regarded as a bad system, and it was considered that employing the multi-split system satisfied the customers more. For example, in the office buildings, the ultimate multi-split system for office workers were sought, and we even talked about using one system for one worker. In the 2000s, everyone started wondering if it was true.

This was caused by good exterior wall materials with increased importance of the balance between comfort and air quality. There used to be an idea called interior perimeter zones in designing room air-conditioning before. But there came the time when we could just concentrate on the interior zone without having to separate the zones due to improved thermal insulation of the outer walls. Under such internal environment, we could concentrate on energy saving when constructing facility systems, so we only considered how to deal with the internal load without interior and perimeter. And then, it soon became that it was not only a matter of if it were multi-spread or central that

we should think about when designing the environment of living space since a new issue emerged from a standpoint of LCCO2 and LCCA. Interior perimeter zones are less considered in recent buildings due to improved performance in 2013. As I said before, the major reason for this is the drastic reduction of thermal load near the window due to utilization of outer walls for windows, especially Low-E and double glasses with high thermal quality.

On the other hand, buildings constructed in the 1980s are to be renewed after 20-25 years, which will come for the future ten years. Younger engineers who have been in charge of facility design and construction are used to the multi-split system (building multi-system), and some of them have even never experienced the central air-conditioning system. They have to renovate the heat source and air-conditioning systems of the buildings with central systems without knowing what they are. I have a feeling that they do not think much of the old system and making inadequate renovation plans without understanding its intentions of designs and controls.

Yoshida: It is important and will evolve more in the future. I do not think it emerged out of blue. From my experience, it used be much discussed since the age of intelligent buildings, i.e., twenty-odd years ago. One technology becomes popular at one time and outmoded some time later, and this repeats like a spiral. What we did and thought in the age of intelligent buildings will be remembered again, and engineers of this age will try to improve it.

The perimeterless system we just talked about has significantly advanced for the past 10 years, and there are many types of them now. While I was working in a company for about ten years after I graduated from university, I got interested in perimeter. I look it up and found out the same technology was used when they designed the office building of National Cash Register Co. (NCR) in the 1960's. I remember being impressed, looking at the article, to know perimeter should be designed in such manner. What I want to say is that perimeter was

being considered in such old days already.

As for another topic of improved efficiency, I think it was largely due to the evolution of semi-conductor technology called inverter. The top-runner mechanism, with which companies strive to be the top, not the average, also worked well. A Company in Osaka who aspired to becoming the top of the world used to say being the top runner is so hard that the company might bankrupt. But, the company has actually grown to be the top of the world in the end, which must have made them realize that striving to be the top is hard but will lead to an epoch-making event.

Furthermore, a device such as highly-efficient centrifugal chillers appeared in the market to fight against the age of less power usage, and we found out that machine efficiency drastically changes as a result of us choosing energy source. I strongly insist how we deal with reusable energy is important, but unfortunately, at this moment, it is only used partially due its unprofitability and difficulty in use. I think what we decide on this matter will influence our next generation.

Kaga: How is the discussion on central and multi-split systems going so far? Are they going to be reviewed?

Tanohata: It will not be a review. We do not know yet if the multi-split system in the office will be all air-cooled heat-pump air conditioning. There are also heat pumps using water heat and heat pumps using gas and they have both merits and demerits. It is also said there will be too much maintenance work since there are indoor devices on each floor. We have a long way to go before we can decide which system should be used.

Kaga: Have things changed a lot since the Great Hanshin-Awaji Earthquake? They started thinking much of earthquake resistance, and I guess machine installation has changed since then.

Yamada: There has not been very significant change. There are new technologies such as quake-absorbing structure and vibration suppression, so it is alright to some

extent if the equipment is just put on it.

Tanohata: After the Great East Japan Earthquake, we are still waiting for the revision of the Building Standards Act regarding the aseismic performance of non-structural members. I heard they are now about to draw up a draft revision of standards for methods, etc., to support facility members such as ducts to show how to prevent the ceilings, which are larger than 500m², from falling when they are shaken in an earthquake. I would imagine they are also considering a way to install equipment bodies. We do not have to worry about light materials which would not harm anybody if it falls, but heavy materials such as steel sheets cannot fall. I have heard quite a lot of materials fell in production facilities, etc., in the last Great Earthquake.

Gomachi: I think the idea of fail-safe, which would not damage human bodies if materials fall, is more important, than preventing them from falling from the ceiling.

Kaga: The idea that it is alright if it falls from the ceiling is prevailing then? We are assuming they fall anyway after having experienced two big earthquakes?

Gomachi: It would be hard to stop them falling completely. We might attach a safety catcher to equipment installed on the ceiling.

Tanohata: It would be hard to find a solution if we keep thinking it is a waste to spend a lot of money where no one can see. If the government sets forth criteria for measures against falling, companies will have to follow them. But at this time, we have not gone that far yet.

Yamada: There were incidents where the ceiling fell in the last great earthquake, and there is a movement to legislate the ceiling part.

Yoshida: We have been talking about the Great East Japan Earthquake, but after the Great Awaji-Hanshin Earthquake, the Society and the Architectural Institute of Japan made an investigation report from the aspect of building equipment. It is very important to accumulate

the damage situation data, but what we do based on that is more important. As a methodology for earthquake resistance, I had been insisting on flexible support, which has just been mentioned, but the Society made firm installation our standard. I think we can reflect on that matter.

The Architectural Institute of Japan saw the pillars and joists being destroyed as a problem, but I insisted that the problem existed with non-structural members. The Institute talked mainly about the structure and would not say much about the non-structural members at that time. But now they are finally starting to talk about them after the incidents in which the ceiling fell in various regions. Those who specialize in the structures are still not interested in them, and I think there are not enough non-structural members specialists.

Going back to where we were, it is important to flexibly support equipment. I visited the Kobe branch of Kansai Electric Power Co., to see the situation right after the Great Hanshin-Awaji Earthquake. I saw some devices firmly installed had been destroyed, while those unsupported were swinging from the ceiling without any damage.

Kondo: It might be better to install equipment in a way it would not harm anybody even if it is destroyed than firmly installing it. Surely firm installation will cost more, and it is the difficult part to decide.

Moriyama: As for aseismic design including structure and facilities was reviewed after the Miyagi Earthquake (1978), and new aseismic criteria were created in 1981, which are still in effect now. The idea that facilities are included in the building has become our textbook. I heard, for example, the buildings were not damaged in terms of seismic isolated structure in some of the cases Prof. Yoshida mentioned. It depends on the situation, but I think such flexibility might work.

Yamada: As for facilities, I would like the architectural side to decide whether to take flexible or firm installation. Though there is an idea of energy saving from designing,

facilities and architecting should also fall into step for earthquake resistance. If it does not show much progress, there may be some problems on the government's side or on the side of the societies such as SHASE and AIJ.

How We Address the Issues for the Future

Kondo: I would like to hear your opinions on the current situation and issues of the Kinki Chapter and how we should address them in the future. For your information, The SHASE's 21st-Century Vision says "SHASE should solve the warring issue of provision of safety, user-friendliness, comfort and health to the society in addition to the goals for transition to sustainable energy and ZEB (Zero Energy Building) and ZEH (Zero Energy Home)." Considering the uniqueness of the Chapter, I would like you to talk about how we should address these issues.

Tanohata: Our mindset changed after the last great earthquake. Transition to sustainable energy is taken for granted, and the idea of Zero Energy Building has been promoted. I believe all building companies are the same. The national energy strategy is coming out in July this year, which might change the situation depending on its content. Also what we propose and promise at the COP19 to be held around in this November and how we modify our old targets will also influence the situation. We will still be going for Zero Energy Buildings, no matter which energy is addressed on, but we will be forced to make a difficult choice on which energy and system we will be depending on until the energy has been decided.

Yamada: Formal names for ZEB and ZEH have a net before each of them. It is difficult to do it on the on-site function. In this sense, an actual transition to zero would be hard without a framework and a social formation like the smart grid for utilizing reusable energy and clean energy outside the industries. This cannot be done only by building and facilities engineers and will need social support. Of course, cooperation with energy suppliers and social systems will also be necessary. We cannot just sit in the Society, but have to extend our activities to collaborate

with one another. If you take Japan's facility technology to another country, for example, it cannot be adapted to the situation of the country. In this sense, it will be not be easy to extend our business to overseas if we do not develop technologies with flexibility. We should not try to do it separately, but think of the way together.



Kaga: If there are unique characteristics in Kasai concerning energy saving issues, we could set up study groups with related themes.

Gomachi: There are certainly geographical characteristics in Kansai. I have been striving for energy saving in our own building in the operational phase since I came to the real estate company. Even if designers and builders make good things, it would not lead to energy saving unless we make full use of them. After the last great earthquake, energy saving has become a social issue, and now everybody in the house is more willing to cooperate. Thinning lights have been more accepted also. Goals cannot be achieved only with engineers' ideas, and we need educate people. We have been holding public lectures, but their attendants are those who are related to the industry. I think we should turn them to public lectures in a true sense.

Yamada: Being a public-service corporation, the Society needs to transmit information outside, not within the organization.

Kaga: People in Kanto would not attend a public lecture held in Tokyo, so it is the role of each chapter.

Gomachi: Organizing a public lecture is quite difficult, but one for, for example, small-medium building owners would be more effective. We once held one for maintenance staff of universities.

Yoshida: Until ten years ago, my study shifted to designs to lead to energy saving operation and operation itself. Considering management, user awareness and energy saving efficiency of the system currently in operation, I would say there still are prospect members. Even if there are not many members from the maintenance side, it ends in subcontractors, general contractors and makers on the suppliers' side. If the maintenance side knows how they should use them and what kind of energy saving they are engaged in, they will be willing to join us. Nobody joins without benefits, so we will have to think that way.

University will do studies of higher level if they know they are useful in the society. The Kinki Chapter should notice it at an early stage, conduct studies and make efforts to develop new systems. That is what I wanted to do in the EM (Energy Management) Study Group. Frankly speaking, building owners would say energy saving, and even zero energy, would be out question when their buildings are not even earthquake resistant. But no conversation produces nothing, and we should be open to start it. There are more types of business now than old days, and more companies are trying hard to go to the top. If we show studies will be connected to technology and manufacturing, like the example of iPS, people from various fields will come to our society.

Kondo: There was an application with software, not a building itself, for the Technical Promotion Award. It shows if we develop and utilize an easy tool concerning

equipment construction and operation, it will contribute to energy saving of existing facilities. It was commercial software made by an engineering company, but I thought it is one thing our chapter could be engaged in.

Tanohata: If the Society develops such software, we can all use it.

Nishiyama: We have won the award twice around 1990 on CAD software development, but I have never heard of operation software on how to use building facilities like this one before.

How the Facilities Should Be in the Future

Kondo: How the facilities should be against large-scale earthquakes has been called into question again after the Great East Japan Earthquake. Also maintenance issues associated with aging in the collapse of the Chuo Expressway tunnel last year are gaining prominent attention. It might be a structure-related issue, rather than facility-related, but anyway, do you have any opinions on this?

Moriyama: Measures against earthquakes will be coming out in the future. It has been only two years since the last great earthquake, and we can foresee only 30-40 years ahead including sustainability and Zero Energy Homes.

Tanohata: As for earthquake resistance, damages will be minimized if we at least follow the new quake resistance standards when constructing buildings. In the last great earthquake, not many buildings and devices were destroyed due to improved aseismic performance. But non-structural members are different, and it is the important point. I was thinking that the Kinki Chapter of SHASE was able to deliver knowledge and counter measures, etc., to each area in East Japan after the last great earthquake, based on the experience and the research result from the Great Hanshin-Awaji Earthquake.

On the other hand, companies and industry organizations were engaged in recovery activities in the quake-hit areas with recovery procedures based on the experience from the Great Hanshin-Awaji Earthquake. We also carried out recovery activities smoothly at the time of the Thai flood with the experience we had accumulated in Japan. But I now think it should not have been done not only on company basis, but by the Society as a whole. It is why I think it will be important for the Kinki and Tohoku Chapters to summarize for the future how they were engaged in the recovery after the earthquakes.

Yamada: You can also see on the Internet the materials the Society prepared after the Hanshin Earthquake. Administrative measures are essential to make them truly effective. It seems the connection between the Kinki Chapter and the government is weak, while the Headquarters is being able to respond to the government well.

Moriyama: The report we wrote after the Great Hanshin Earthquake has been posted on the SHASE magazine. Prof. Mizuno and I were in charge of lifelines and made it into a small booklet, and we even received inquiries from outside the organization. We also responded to inquiries after the Great East Japan Earthquake, but I am not sure how helpful we were since most of the lifelines were related to civil engineering.

Yoshida: As far as I remember, the report was on the investigation of the post-disaster situation. After that, the Society discussed what it should do to set the current criteria. The Architectural Institute of Japan, in which I also participated as a committee member, set the policy for earthquake resistance including non-structural members three to four years after the quake. BCP (Business continuity planning), which Mr. Tanohata mentioned before, is certainly important, and making the plan at the earliest stage will be very useful in the upstream of the affected areas.

I do not think the Society is thinking enough about safety. As BCP largely depends on building facilities, it should be

treated from that standpoint. Construction anchors caused problems in the last tunnel collapse accident, and the Society had made an investigation under this theme after the Great Hanshin Earthquake. The result said there would be a problem if the construction was not good enough, but this accident was also caused by a bad design. Looking at safety from the standpoint of aging and safety design to prevent disasters from occurring are different, and we will need to sort them out as well.

Hopes and Expectations for the Kinki Chapter

Kondo: Finally, would you tell us hopes and expectations for the Kinki Chapter?

Kaga: I would like the Kinki Chapter to deal with another issue stated in the 21st-Century Vision, which is study activity using the Chapter budget. It often results in the situation where it cannot be done due to lack of money, but I would like them to discuss why it cannot be done without money.

Tanohata: I think study groups which leads to rejuvenation of the Chapter needs to be formed. For example, they can set up a study group with young persons in their 30s or 40s in universities and companies to study and make proposals under some particular themes. The result will be presented in an event held every year for social evaluation. If such system is created, more will be transmitted from Osaka and Kinki area to Tokyo and even to the whole country.

Yamada: The 21st-Century Vision says they will strive for “general environmental solution business.” The word “general” means not only element technology but the whole system. Although there is no need to change the Society’s basis, study activities on environmental technology should be carried out with interaction with people from industries and fields with new standpoints. I would like the Chapter to rejuvenate and expand its activities by doing so. I think introduction of different cultures will be needed.

Gomachi: I am of the same opinion. It seems the same companies are participating in the Chapter’s events recently. It is important to call for participation from companies which have not, and to find out contact points with related organizations in Kinki area for cooperation.

Moriyama: They are having a difficulty in getting students into the Society. In order to connect education and the Society study, they should have another look at them. It is important to create opportunities for students to participate in the Society in the regard of broadening the Chapter activities.

Kondo: It seems there is not much cross-university interaction among students, so they can use the Society as such forum.

Yoshida: They should think about not only utilizing seeds, but also marketing themselves. They should seek a way to market themselves not only by seeking gentlemanlike revitalization, but by considering what makes Osaka and Kansai so unique. For example, as mentioned before, since Yasui Architects and Engineers, who is the top leader in BIM, is in the Kinki Chapter, they should address BIM issues to stay competitive with Tokyo. Daikin also develops software, and bringing such theme into the Chapter would also be good. Such movement triggers the Chapter’s development. Another thing about students’ participation is that the Chapter should be more creative considering students might join the companies engaged in the Society activity. It is important for the Chapter to think of a way to make students think “It should be OK since it’s the Society,” “Facilities are doing good things” and “Studying facilities is useful,” i.e., to connect students with the Society.

Kondo: I agree matching of students and the company members are important since students will not be able to find out seeds if they just stay inside the university, either. I would like to thank you all for being here and expressing your valuable opinions for the Kinki Chapter’s development today.

International Exchange

1. The “Exchange meeting for foreign student” and “International student exchange meeting” is held for international students enrolled in the Chapter.
2. The Chapter holds Lecture Meeting for International Academic Exchange by researchers from abroad and Report Meeting on Companies Overseas Activity and Report Meeting on International Technology Trend by member companies of the Chapter.
3. At present, the Chapter has made cooperation agreements with the following 2 organizations.
 - China / Shanghai Society of Refrigeration
 - Korea / Society of Air-conditioning and Refrigerating Engineers of Korea (SAREK) – Busan, Ulsan, Gyeongnam Chapter

The agreements include privileges such as those below. For more detailed information, please contact our chapter office.

 - Members of each chapter can attend meetings and general gatherings at the respective chapters just as in the members’ own chapter.
 - A member of a chapter can purchase published materials from the other chapters at the members rate.
 - In accordance with cooperation agreements with fellow society headquarters, a member of one

Activities for International Exchange from 2003-2011 (these 10 years)

1. Exchange meeting for foreign student (-2009), International student exchange meeting (2010-)

| Date | Excursion place |
|---------|---|
| 2003.10 | Namba redevelopment A-1 site (Osaka) |
| 2004.9 | Sakai Gas Building (Sakai, Osaka) |
| 2005.9 | Daikin Industries, Sakai plant (Sakai, Osaka) |
| 2006.9 | Sinko Industries, R&D Center (Neyagawa, Osaka) and Osaka Securities Exchange Building (Osaka) |
| 2007.9 | Aioi Insurance Mido-suji Building (Osaka) |
| 2008.10 | Umeda Center Building (Osaka) |
| 2009.10 | The Research Institute for Humanity and Nature (Kyoto) |
| 2010.10 | Osaka Fukuoku Seimei Building (Osaka) |
| 2011.10 | Breezé Tower (Osaka) |

2. Lecture Meeting for International Academic Exchange

| Date | Title | Lecturer | Affiliation |
|---------|--|---|--|
| 2003.11 | Recent Progress of Building Ventilation and Air Conditioning in Sweden | Mats Sandberg | University of Gävle (Sweden) |
| 2005.11 | 1. Trend in Heat Pump and Thermal Energy Storage Technology in China, 2. HVAC System and Ventilation Research Trend in Denmark and Europe — Impact of the implementation of a new EU-directive on energy performance of buildings | Kazunobu Sagara Per Heiselberg | Osaka University (Japan) Aalborg University (Denmark) |
| 2007.2 | Exterior Insulation and Energy Saving in North America and China 1. Development in Exterior Insulation Finishing System (FIFS) and Energy Saving in USA 2. Exterior Insulation Finishing System (FIFS) and Energy Saving in China 3. On the Appropriate HVAC Systems for Externally Insulated Buildings | Stephan E. Klamke Roger W. Peevler Tohitaru Okazaki | EIMA Industry Members Association(USA) Beijing Dryvit Chemical Building Materials (China) Sanken Setsubi Kogyo (Japan) |
| 2007.5 | Status and Trends of Building Energy Efficiency Issue in China | Weiding Long | Tongji University |
| 2007.11 | New Aspects in Urban Climatology Research | Wilhelm Kuttler | University of Duisburg-Essen (Germany) |
| 2008.7 | Trend in 2007 ASHRAE Winter Meeting and Exhibition (AHR EXPO 2007) | Ryuji Yanagihara | The University of Tokyo (Japan) |
| 2008.10 | Adaptive Thermal Comfort in Buildings | Michael Humphreys Fergus Nicol | Oxford Brookes University (UK), Oxford Brookes University and London Metropolitan University (UK) |
| 2009.8 | 1. Water Supply and Drainage in China, 2. Urban Environment in Shanghai – Water, energy and HVAC | Xueyan Li, Hongwei Tan | Sekisui Kanzaï Technics (Japan) Tongji University (China) |
| 2010.5 | Air Conditioning Technologies and Their Trend in China with a special focus on recent progresses in digital design techniques | Guoliang Ding | Shanghai Jiaotong University (China) |
| 2011.2 | France and Environment, Overview of the “Grenelle de l’ environnement”, Synthesis of measures concerning Housing | Sylvie Charbonnier | Saint-Gobain (France) |
| 2011.5 | Renewable Energy and Energy Consumption in Korea | Sung-Woo Cho | Changwon National University (Korea) |
| 2011.5 | Cool Roofs and Cool Pavements to cool the world, heat islands, and buildings: A lucrative way to slow global warming | Hashem Akbari | Concordia University (Canada) |
| 2011.10 | Thermal Comfort and Recent Developments in the Adaptive Comfort Standard – ASHRAE 55-2010R | Richard de Dear | University of Sydney (Australia) |

3. Report Meeting on Companies Overseas Activity (-2009), Report Meeting on International Technology Trend (2010-)

| Date | Title | Lecturer | Affiliation |
|---------|--|--|---|
| 2008.3 | Current Situation on Energy Saving and Proposed Examples of Energy Saving Scheme – Business Model by means of ESCO and Commissioning Method | Naoki Takahashi | Nikken Sekkei Research Institute |
| 2009.1 | 1. Activity and Problem in Global Expansion of Environmental Technology 2. Global Expansion in Air-conditioning Manufacturer | Mitsuru Nishiyama Shinya Harada | Taikisha Daikin Industries |
| 2010.1 | 1. Action for Climate Change Issue and Overseas Activity in Electric Power Company 2. Action for Reduction of Greenhouse Gas in Shimizu Corporation | Koji Toyama Hiroyuki Kurita | Kansai Electric Power Shimizu Corporation |
| 2010.11 | Visiting Report on Green Building in USA and Big Project in UAE | Kazunobu Sagara | Osaka University |
| 2011.1 | 1. Trend in Wastewater Heat Recovery in Switzerland and Germany 2. Better City, Better Life in Shanghai | Masaki Nakao Minako Nabeshima | Osaka City University Osaka City University |
| 2012.1 | Visiting Report to Shanghai based on Affiliation Agreement with Shanghai Society of Refrigeration 1. Report on Academic and Technology Exchange Meeting 2. Building Service of Citigroup Tower and Shanghai World Financial Center 3. Electric Power Demand in China, Industrial Exhibition, Architectural Design & Research Institute of Tongji University 4. Visiting Report | Minako Nabeshima Mitsuru Nishiyama Osamu Koga Syoji Yamashita | Osaka City University Taikisha Kansai Electric Power Osaka Gas |

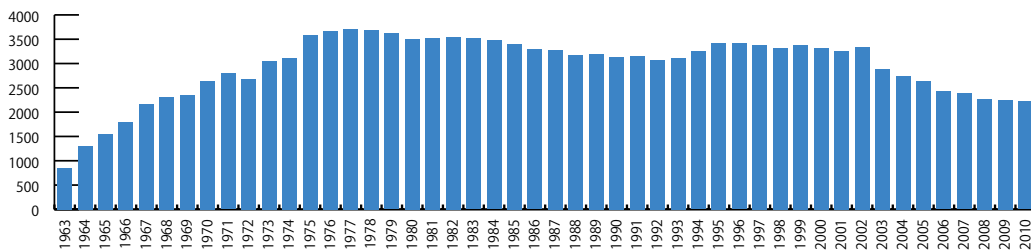
4. Mutual Visit for International Exchange by Affiliation Agreement

| Date | Title | Lecturer | Affiliation |
|---------|--|---|---|
| 2009.3 | Visit to Shanghai Society of Refrigeration (Meeting at Shanghai) | Masaya Narasaki Toshio Yamanaka Yoshihisa Momoi | Osaka University Osaka University Osaka University |
| 2009.8 | Visit from Shanghai Society of Refrigeration (Meeting at Osaka) | Hongwei Tan | Tongji University |
| 2009.12 | Visit to Shanghai Society of Refrigeration (Meeting at Shanghai) | Masaki Nakao Hideki Shibaïke | Osaka City University Kyoto Institute of Technology |
| 2010.10 | Visit to Busan, Ulsan and Gyeongnam Branch of SAREK (Meeting at Busan) | Hisashi Kotani Yoshihisa Momoi Eunsu Lim Toshio Yamanaka | Osaka University Osaka University Osaka University Osaka University |
| 2010.11 | Visit to Busan, Ulsan and Gyeongnam Branch of SAREK for the 20th Anniversary Annual Meeting of the Branch (Meeting at Busan) | Hideki Shibaïke | Kyoto Institute of Technology |
| 2011.11 | Visit to Shanghai Society of Refrigeration (Meeting at Shanghai) | Hideki Shibaïke, Minako Nabeshima Daisuke Ogura Mitsuru Nishiyama Osamu Koga Syoji Yamashita | Kyoto Institute of Technology, Osaka City University Kyoto University Taikisha Kansai Electric Power Osaka Gas |

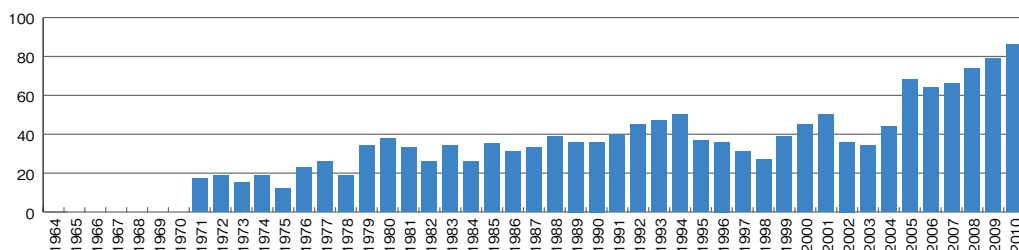
50-year Movements of SHASE and the Society

| Year | Movement of industry | Movement of society | Year | Movement of industry | Movement of society |
|------|---|--|------|---|--|
| 1963 | | News on assassination of US President Kennedy received on the first Japan satellite relay (Nov 22) | 1988 | | |
| 1964 | Revision of Enforcement Order of Fire Service Act (specifications for floors above 10th fl., new establishment of sprinkler regulation) | Tokyo Olympics (Oct 10) | 1989 | | Fall of Berlin Wall (Nov 9) |
| 1965 | | Tokai-mura nuclear plant in Ibaraki succeeds first atomic power generation for business use (Nov10) | 1990 | | Unification of East and West Germans (Oct 3) |
| 1966 | | Spate of aviation accidents | 1991 | | Pyroclastic flow at Mt. Unzen-Fugen with 43 deaths and missing persons (Jun 3) |
| 1967 | Promulgation of Environmental Pollution Prevention Act | | 1992 | Promulgation of Environmental Pollution Prevention Act | |
| 1968 | | 300-million-yen rubbery case in Fuchu, Tokyo (Dec 10) | 1993 | | Marriage of the Prince with Princess Masako (Jun 9) |
| 1969 | | US APOLLO 11 rocket makes first-ever lunar landing (Jul 20) | 1994 | | Opening of Kansai International Airport (Sep 4) |
| 1970 | 5th partly revision of Building Standards Act (strengthening of standards for building facilities, new establishment of smoke control system) Enactment of Law for Maintenance of Sanitation in Buildings (Building Administration Law) | Japan World Exposition in Senri, Osaka (Mar-Sep) | 1995 | Enactment of Act for Promotion of the Earthquake Proof Retrofit of Buildings (Ministry of Construction) | Great Hanshin-Awaji Earthquake. M7.2 large inland earthquake causing huge fires in Kobe killing more than 6,000 people (Jan 17) Tokyo subway sarin gas attack (Mar 20) |
| 1971 | | US President Nixon suspends exchange of gold and dollars (Aug 15). Dollar shock spreads all over the world | 1996 | | |
| 1972 | Establishment of system for chief engineer for piping work(Revision of Construction Industry Act) | Fire in Osaka Sennichi Department Store (May 13) | 1997 | | Yamaichi Securities gives up reviving itself (Nov 20) |
| 1973 | | | 1998 | | Nagano Winter Olympics (Feb 7) |
| 1974 | | | 1999 | Ministry of Construction announces raise of judging standards of building owners against PAL/CEO (Mar 30) | |
| 1975 | | Whole Sanyo Shinkansen goes into service (Mar 10) | 2000 | | Huge eruption of Miyake Island (Jul 8) |
| 1976 | | | 2001 | | US 9-11 (Sep 11) |
| 1977 | | Red Army hijacks Nikko airplane and forces to land at Dacca Airport (Sep 28) | 2002 | Partly revision of Building Standards Act Countermeasures against sick house syndrome | Soccer World Cup in Japan and South Korea (May 31-Jun 30) 5 abductees returns from North Korea (Oct 15) |
| 1978 | | Miyagi Earthquake (M7.5) (Jun 12) | 2003 | | Iraq war starts (Mar 20) |
| 1979 | Enactment and promulgation of Act on the Rational Use of Energy (Energy Saving Law) | | 2004 | | US helicopter from Futenma crashes at Okinawa (Aug13) |
| 1980 | | | 2005 | | Derailment accident on JR Fukuchiyama Line (Apr 25) |
| 1981 | Enforcement of Revised Seismic Design Method | | 2006 | Law to partly revise Architect Act, etc. Obligation of legal compliance inspection by first class architect (facility design and structure design) on certain buildings | |
| 1982 | | | 2007 | | Deficiency in public pension records for 50,000,000 people revealed (Feb 17) |
| 1983 | Partly Revision of Architect Act and Building Standards Act(establishment of qualification system for building mechanical and electrical engineer) Law of Ministry of Construction (May 20) | Huge eruption of Miyake Island in Izu island chain (Oct 3) | 2008 | Partly revision of law on rational use of energy (obligation to notify on energy saving measures for small-medium sized buildings bigger than 300 sq m) | 34th Summit in Toya-ko (Jul 7) |
| 1984 | | Glico Morinaga case (Mar 18) | 2009 | Revision of announcement related to smoke control system under Building Standards Act. Addition of lobby pressurization smoke control system | Democratic Party sweeps to victory in Lower House election. Change of power (Aug 30) |
| 1985 | | Nikko Jumbo Jet crashes on Mt. Osutaka in Gunma520 deaths and 4 survivors (Aug 12) | 2010 | | |
| 1986 | | Nuclear explosion at Chernobyl in Ukrainian Soviet Socialist Republic. 110,000 residents evacuate (Apr 26) | 2011 | | The Great East Japan Earthquake (M 9.0) (Mar 11). Explosion at Fukushima-1 nuclear power plant and radioactive contamination spreads (Mar 12) |
| 1987 | | Japan National Railways ends its 115-year-old history and to be privatized and split up (Apr 1) | | | |

Number of Members



Number of Academic Publications



Chapter Chiefs

(Honorifics omitted)

| Period | Chapter Chief |
|-----------|---------------------|
| 1963-1966 | Yasushi Niizu |
| 1967-1972 | Ryotaro Tanaka |
| 1973-1974 | Takao Kato |
| 1975-1978 | Kazuo Naito |
| 1979-1982 | Toro Hayashi |
| 1983-1984 | Toshiro Ozono |
| 1985-1986 | Ryosuke Ota |
| 1987-1990 | Masaya Narasaki |
| 1991-1994 | Tetsuo Naruse |
| 1995-1997 | Katsuhito Yamaguchi |
| 1998-2000 | Takao Tushima |
| 2001-2002 | Minoru Mizuno |
| 2003-2004 | Katsuhiko Tsuji |
| 2005-2006 | Harunori Yoshida |
| 2007-2008 | Akikazu Kaga |
| 2009 | Masakazu Moriyama |
| 2010 | Masaki Nakao |
| 2011 | Shuichi Hoki |

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