

International Gas Turbine Congress 2015 Tokyo Flash Report

IGTC2015 Executive Committee
Chairman Toshinori Watanabe

1. Introduction

The International Gas Turbine Congress 2015 Tokyo (IGTC2015 Tokyo) was held in Toranomon Hills from November 15 (Sunday) - 20 (Friday) 2015. Thanks to the diligent efforts and cooperation of the parties concerned, the Congress was completed with many highly successful outcomes, such as recording the largest ever number of papers. The Executive Committee are still putting together the final report, but in this flash report we provide an outline of the event.

2. Participants

The total of pre-registered and on-site registration participants was 569 people. 155 people from 27 foreign countries and 414 Japanese people attended. The number of foreign participants was a record for IGTC, and there was a feeling that the event has established itself as an international conference. The number of participants from Germany stood out with 43 people, other countries with strong attendance were China with 23 people, the United States with 16 people, the UK with 12 people, and South Korea with 10 people. The spread to Asia and the Middle East could also be seen, with 6 people from India, 4 from Iran, 3 from Indonesia, and other participants from countries such as Egypt, Kuwait, Malaysia, Oman, Singapore, Taiwan, Thailand and Turkey.

3. Presentations

(1) Paper presentations

261 abstracts were submitted and a record 213 papers were finally adopted. 98 were from overseas and 115 were from Japan. The paper presentation session could no longer fit the conventional six rooms and parallel sessions had to be held in seven rooms. There were two no-shows (Russia and the United Kingdom), and the number of presentations was 211.

(2) Invited presentations

Three speakers were invited from foreign countries, and one from Japan. Mr. Free of the NASA Glenn Research Center presented on the theme of the history of aviation technology at NASA, Dr. Patel of Special Metals Corporation (USA) presented the outlook for nickel-base superalloys, Professor Vogeler of TU Dresden (Germany) presented on the application of probabilistic analysis to turbomachinery design, and Mr. Yoshiaki Tsukuda of Mitsubishi Heavy Industries presented on the challenges for blast furnace gas-fired GTCCs in steel works. All had many participants, and lively Q&A sessions were held.

(3) Panel Discussion

A panel discussion was held on three themes. In the “Challenges in Propulsion Technology for Next Generation Air Transport” session, jet engine-related research institutes, manufacturers, users, and panelists from the Government took the stage, and a discussion of next generation aero-propulsion was carried out with a wide perspective. In the “Current Status and Future Strategy of Electricity and Energy Supply in Asian Countries” session, in addition to exchanging information from previous IGTCs and Asian Congress on Gas Turbines events between Japan, South Korea and China, panelists from India and Thailand took part and the Asian energy situation was widely introduced. The “Energy Strategy: Role of Gas Turbines in the Future Energy Network” session was the last session in the afternoon on the final day of the Congress, but there was a large turnout. There was lively debate among the panelists, and many participants commented that they found the sessions useful.

(4) Forums

At the 2015 IGTC, presentations and discussion sessions without papers were called forums, and three were held. “Perspective on Electric Propulsion Technologies for Aircraft Applications” was a forum on electric power that has become a hot topic in recent years as the future of aviation propulsion systems, and there were many participants and a lively Q&A session. “CFRP in Aircraft Engine Technology” was a forum attended by researchers in the field of composites, which has had a weak relationship to the aviation engine field up to now, and interesting presentations and Q&A were carried out. The “GTSJ-IGTI Joint Forum on Additive Manufacturing” was the first ever ASME/IGTI joint forum. It covered fields of high interest and there were very active discussions.

4. Exhibition

38 companies and institutions exhibited booths in the exhibition halls on the 4th and 5th floors of Toranomon Hills. In addition to displays of hardware, such as gas turbines, jet engines, models and parts, many people also gathered at the software exhibition booths. ASME/IGTI had a booth to introduce activities and publications. GTSJ is exhibiting a booth at ASME Turbo Expo from 2014, and this exhibition has a meaning of mutual cooperation. There was a total of 1570 visitors. In addition, a questionnaire survey was conducted at the venue and distributed to 800 people. The questionnaire will be summarized into a document to allow the opinions to be reflected in the future. Six university related laboratories exhibited, and displayed A0 size posters near the Conference reception desk on the 4th floor.

5. Event

Registration began on the evening of the first day, and a welcome reception was held in the evening. 95 people participated, and the event was crowded with people catching up with old friends and meeting for the first time.

A banquet was held on November 18 (Wednesday) after the session ended and a large number of

participants attended. Initially 180 participants were expected, but since applications increased rapidly after Web registration was opened, a larger room that could accommodate 220 people was chosen. But in fact even more people hoped to attend. The *nigiri* sushi and sake tasting corners were very popular, and the performance by the Waseda University of Japan Dance Workshop really brought the event to life. After the dance the student dancers were deluged with attendees wishing to take photos together.

On November 20 (Friday) two plant tours were conducted and completed successfully. Also, backyard tours to see the Toranomon Hills generation system were conducted during the Congress lunch breaks.

6. Related Events

(1) Public Lecture on Jet Engine and Gas Turbine

A “Public Lecture on Jet Engine and Gas Turbine” was held at Toranomon Hills on November 15 (Sunday) from 13:00 to 14:30. Professor Takehiro Himeno of the University of Tokyo gave a lecture with the aim of deepening understanding about jet engines, gas turbines and energy technology among the general public including high school students and junior high school students. About 60 people attended, including elementary school students, and there was a positive reaction, with comments that the lecture was easy to understand. The Technology Adoption Committee was responsible for the planning and operation.

(2) Women's Meeting

Women participating in the IGTC were invited to a meeting held in Toranomon Hills on November 17 (Tuesday) after the session. 14 ladies participated, and the meeting greatly facilitated communication between female engineers. In order to encourage activities to promote women's participation in the Society, not only limited to IGTC, the Board of Directors decided to establish a Committee for the Promotion of Participation by Women.

7. Final Words

The fact that IGTC2015 could finish with such great success is thanks to the support of various organizations, the efforts of those concerned and the grants and sponsorships received. We would like to express our deep gratitude to the Executive Committee members for sparing the time in their busy schedules to devotedly work so hard for the event. We would also like to express our sincere thanks to the Society administrative office, President Tanuma and Vice President Kuyama for their great cooperation. We would also like to say thank you to the event office e-side inc., who provided strong support, and the Toranomon Hills staff. We are also very much indebted to the International Advisory Committee who encouraged participation from overseas. And finally we would like to conclude this flash report by expressing our most sincere gratitude to everyone who contributed to the peer reviews and who attended the Congress.

The details of the Congress shall be reported again in publications such as the Society newsletter after the Executive Committee have completed their activities.