

In recognition of the 50th anniversary of the ASME International Gas Turbine Institute's annual gas turbine conference, TURBO EXPO '05, this April 2005 issue of the Journal is devoted to papers from the conference's most recent meetings.

About 65–75 percent of Journal papers come from TURBO EXPO. Since the first IGTI gas turbine conference in 1956, a remarkable total of 12,453 refereed papers have been published in conference proceedings and presented at this one annual meeting. Usually, between 25 and 35 percent of conference papers are judged by reviewers to be archival. Thus, for the last half century, I estimate that about 4000 or so have been published in the Journal, in our companion publication *Journal of Turbomachinery*, or in the predecessor of both, the *Journal of Engineering for Power*.

The IGTI First Annual Gas Turbine Conference and Exhibit was held April 16–18, 1956 at the Hotel Statler in Washington, DC. This very first ASME all-gas turbine meeting had 25 exhibitors, six technical sessions, a total of 17 papers and an attendance of about 750. The conference fee was \$5 (with papers) and \$2 (without papers). By way of contrast, IGTI's 49th gas turbine conference, TURBO EXPO '04 in Vienna, June 14–17, 2004 had 155 exhibitors, 187 technical paper sessions, a total of 732 papers and an attendance of 2443. (It goes without saying that the Vienna conference fees were substantially higher than those of 1956.)

The IGTI gas turbine conference has been ASME's leading international technical meeting from its very beginning. The annual meeting is held in North America and in Europe on alternate years. Currently, more than half of the papers presented are from non-North American parts of the gas turbine community, most coming from Europe and Asia.

The gas turbine is the “youngest” of energy converters. The first jet engine-powered flight took place in Germany and the first operation of a gas turbine to generate electrical power occurred in Switzerland, both in 1939. Within five years of this “birth,” the organization of IGTI—and of the gas turbine conference—commenced. Here are a few milestones, facts and dates that led to TURBO EXPO:

- On May 8–10, 1944, ASME's 17th National Oil and Gas Power Conference was held mid-continent (wartime) at the Mayo Hotel in Tulsa, OK. The technical program consisted of four sessions (a total of ten technical papers); three on diesel engine technology and one (two papers) on the newly emerging gas turbine. As *Mechanical Engineering* magazine reported: “Demonstrating the technical interest aroused by the gas turbine, first new prime mover in 50 years, a capacity crowd of approximately 250 attended the first technical session which was devoted to that subject.” In anticipation of this intense interest in new gas turbine technology, on May 7, 1944, the Executive Committee of the Oil and Gas Power Division voted to form a ten member Gas Turbine Coordinating Committee (GTCC) to provide “. . . coordination and dissemination of new technical information on the gas turbine through periodic meetings and the presentation of technical papers.” This newly formed GTCC, with R. Tom Sawyer of the American Locomotive Company as its chairman, was the start of IGTI.
- By March 1947, GTCC had grown to 31 members and had sponsored an increasing number of gas turbine papers at ASME conferences. With its growing membership, the GTCC petitioned ASME for division status, and this was granted on August 14, 1947. Thus the Gas Turbine Power Division was formed, later to be called simply, the Gas Turbine Division (GTD). As the prime organizer (and by then author of the text, *The Modern Gas Turbine*), R. Tom Sawyer was the first chairman, serving for the remainder of 1947.
- The new GTD started in 1948 with three technical committees: Committee on Theory, Committee on Design, and Committee on Application. Over the last 57 years, these three grew into the 17 technical committees which form the backbone of IGTI today.
- As the international gas turbine community grew, the number of papers sponsored by the GTD increased to the point that it was obvious a separate meeting was needed. The first one was held in Washington, DC, in 1956 as mentioned above, with succeeding annual meetings taking place in other US cities. In 1966 Zurich was chosen as the first European site for the gas turbine conference. Not long after, the annual meeting developed into its present schedule of locating in North America and Europe in alternate years.
- As the GTD conferences increased in size in the years after 1956, it became more and more apparent that a separate ASME staff was needed to take over the administration and operation of the Division. In 1978, Donald D. Hill became Director of Operations for the GTD and set up his office in Atlanta, with Sue Collins as his assistant. In 1982, additional staff was hired to take over direct management of the exposition.
- By 1986, the Gas Turbine Division outgrew its divisional status and was made an institute of ASME—the International Gas Turbine Institute—as we know it today. In 1988 the annual gas turbine conference was

renamed TURBO EXPO. Projects and services developed, produced and financed by IGTI have increased, and the professional staff now numbers eight. The Atlanta office is IGTI's headquarters and the hub of its international activity.

This Journal started 125 years ago as a collection of papers on energy conversion technology in the 1880 first volume of the Transactions of the ASME. For the last 50 years, IGTI's annual gas turbine conference has been a major contributor to the Journal. We salute the authors, reviewers, and organizers of TURBO EXPO, as they prepare to present papers and celebrate the 50th gas turbine conference in Reno, Nevada on June 6–9, 2005.

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Editor