One Goal, One Expectation

— Do a good job as host of the 69th World Foundry Congress

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As a traditional metal-forming technology, casting/foundry has written a brilliant history chapter in the long development process of human society and civilization progress, leaving behind deep memories and symbols.

China is one of the ancient civilizations in the world that first mastered the art of casting. For thousands of years, Chinese people have created a large number of cast metal products and precious pieces in the collection of world’s treasures. The exquisite and brilliant casting technology of ancient China had not only built a foundation on which China became a strong nation in casting, but also provided a valuable and own—all asset for human society.

China earned the right to host the 69th WFC

Entering into the 21st century, driven by the strong trend of China’s sustaining and rapid economic development, the casting production in China has been growing rapidly. The overall quality, technology, independent innovation ability and management level of casting products have been significantly improved, a number of mechanized or automated production lines have been built, and some positive changes in casting product structure have also been made. China has truly become a world casting—power, and China’s foundry industry has played a more and more active and critical role in adapting to the rapid development need of the national economy and in improving people’s living standards. Since 2000, China’s output of castings has ranked No. 1 for nine
(9) consecutive years, left an impressive mark in the world foundry industry. As the world's largest casting producer, China continues to increase its trading volume of castings in the international market, and many, many castings are exported to various locations in the world. Some advanced technology methods and equipment, detection and analytical tools have been actively and effectively applied. At present, China has been able to produce some castings with relatively high technical difficulty and high quality requirement. These castings are used in automobile manufacturing, aerospace, heavy equipment, electric power, military and other fields. Currently, China is taking various effective measures to develop "Green Foundry" and actively to tackle the problems that foundry industry faces in high consumption of energy and resources and serious environmental pollution and other issues.

The sustained and rapid development of Chinese foundry industry has won the admiration and respect from its peers/counterparts in the world, and also won the attention and esteem of the World Foundrymen Organization (referred to as ‘WFO’). In 2001, the former President of FICMES, Professor Sun Guoxiang was elected as a WFO Executive Committee member, representing Chinese foundry industry to play an important role on the world casting stage. On February 11, 2003 during the WFO Executive Committee meeting held in the United Kingdom, the committee members made election on applications by China, Russia, Mexico and other WFO members to host the 60th World Foundry Congress in 2010. In the end, the China’s position in world foundry industry and its hosting condition convinced the WFO Executive Committee and won the hosting right for 'The 60th World Foundry Congress in 2010' (hereinafter referred to as 'WFC 2010'). For the Chinese foundry industry, hosting the WFC 2010 in China will be recorded as a history-making event.

Chinese foundry industry entering into the world
— A historical review

The Foundry Institution of the Chinese Mechanical Engineering Society (FICMES) was founded in 1962, and began to represent China in 1963 to interact with the International Committee of Foundry Technical Associations (the predecessor of the World Foundry Organization, known CIATF). In September 1963, The 30th World Foundry Congress (WFC) was held in Prague, Czechoslovakia, and by invitation, FICMES on behalf of China sent a five-member delegation headed by the Deputy President, Mr. Rong Ke to attend the congress as a non-member country. That was the first time for FICMES delegation to participate in WFC. Since then, FICMES organized delegations and attended, as CIATF non-member, the 32nd (1965, Netherlands), the 43rd (1976, Romania) and the 45th (1978, Hungary) World Foundry Congress.

In October 1978, FICMES sent a nine-member delegation headed by Mr. Luo Gan, Deputy President at that time, to the 45th WFC in Budapest, the capital city of Hungary. During the congress, the CIATF members’ meeting was held to discuss China’s application for CIATF membership. The representatives of member countries unanimously agreed to accept China as CIAT 31st member state. Since then, China has become a full member of CIATF and formally begun friendly exchanges with casting/foundry scientists, technologists and workers of countries around the world, which has realized the aspirations of vast Chinese foundry professionals, and has laid a good foundation for the Chinese foundry industry to conduct international exchange and cooperation.

In September 1979, FICMES organized a five-member delegation headed by Mr. Xu Shaogao, Deputy Secretary-General of Chinese Mechanical Engineering Society, to participate the 46th WFC in Madrid, capital of Spain. That was the first time for China to attend CIATF congress as a full member. At the Representative Meeting, the Chinese national five-star red flag fluttered in the wind, and members of all other countries welcomed the Chinese delegation with warm applause.

In the 46th WFC, Professor Zhou Yaohe of the Northwestern Polytechnical University, presented a research on Casting Riser System with Thermal Insulation, which became the first official paper from China ever presented at the WFC. After presentation, that paper was elected as Excellent Research Paper of the congress, making the international peers see the relatively high level of academic research in Chinese foundry field. Since then, Professor Zhou started having significant influence in the international casting area
and making his foundry industry peers across China have a new view on him. In 1988, recommended by the Chinese Mechanical Engineering Society, Professor Zhou Yaohe, the President of FICMES at that time, was elected as a CIATF Executive Committee member during the 55th WFC held in Moscow. From 1989 to 1992, Professor Zhou continuously served as head of Chinese delegations for four times to attend the WFCs. Professor Zhou was elected as CIATF Vice-President in 1992, and promoted to CIATF President position in 1993. As the first CIATF officer from China, Professor Zhou Yaohe expanded China’s influence in CIATF, promoting advancement in casting technology and making great effort for the 61st WFC 1995 held in China.

In 1988 FICMES submitted application to the CIATF to host the WFC. After fierce competition, China won the hosting right for the 61st WFC which was held during September 24–28, 1995 in Beijing. This congress attracted 668 representatives from 38 countries and regions (including 460 foreign representatives). The theme of the congress was “Advanced Casting Technology and Production Management.” Professor Itsuo Ohnaka from Osaka University, Japan, delivered the opening address and Professor Sun Guoxiong, former President of FICMES, made a welcome speech. 46 official papers and technical exchange papers from 26 countries and regions were presented in the congress. The main topic of technical forum was “Casting solidification and structure control.” Eight experts invited from the United States, China, Switzerland, Germany, Great Britain and Japan gave lectures/reports during the congress. 60 papers were also arranged in the poster-presentation format for academic exchange during the congress. Running concurrently with the 61st WFC was the 95th International Foundry Exhibition. Meanwhile, plant tours and entertaining performance were also arranged. During the congress, CIATF had its annual meeting and Executive Committee meeting. Mr. Tang Yulin, former Secretary-General of FICMES and Professor Sun Guoxiong, former President of FICMES, attended the CIATF meeting.

The 61st WFC was a complete success, and received high marks from congress delegates and CIATF. The conference event had an important impact on the development of Chinese foundry industry, and played a significant role for Chinese foundry industry to march into the world, to promote international cooperation and to grow as well as advance with the world’s foundry industry.

After the 61st WFC, CIATF sent an appreciation telegraph to the Organizing Committee. The message wrote: “After returning home safely, our minds are still filled with China’s strong and unforgettable memories. We would like to express our sincere appreciation and deep gratitude to the Chinese friends for your warm reception and for your great effort to ensure the 61st World Foundry Congress a great success in Beijing. We are confident that all of the participants have enjoyed and learned in various aspects. The beauty of China, especially the friendly Chinese people has left the delegates a deep impression. The Beijing congress and the sightseeing/travel in China after the meeting are truly unforgettable. Please send our special greetings and thanks to all the members of the Organizing Committee for their effort to overcome many difficulties for the successful event, and thank very much each and everyone who has made contribution to the congress.”

Best effort for the success of the 69th WFC

In order to well organize WFC2010 and to devote a successful event to the world’s foundry industry, FICMES held a President’s working conference in December 2006 in Beijing. The meeting focused on discussion and layout of some of the items/issues to host the WFC2010 event, and as a result, the “69th WFC” Organizing Committee and the corresponding executive agencies were established. Around the “sustainable development” global topic, the Organizing Committee set “Green Foundry” as the theme for the 69th WFC, corresponding to the characteristics of “high pollution, high discharge, high consumption” in the foundry industry.
After several visits and overall consideration, the Organizing Committee finally decided in December 2007 that the venue for WFC2010 is to be the historical and cultural city — Hangzhou located in the heart of the economically developed Yangtze River Delta region. Upon knowing that the 69th WFC will be held in Hangzhou, Hangzhou municipal people’s government gave this international congress event a great deal of attention and support, and decided to co-host the 69th WFC with FICMES. The Organizing Committee has reached a decision that the 69th WFC will be held at the Zhejiang People’s Great Hall in Hangzhou, October 16–20, 2010.

At present, over 269 papers have already been collected from 28 countries around the world, including more than 100 papers from abroad. These papers are rich in contents involving various aspects and fields of foundry industry, presenting the world’s latest advancements and future prospects in casting technology.

On February 10, 2008 at the closing session of the 68th WFC, Professor Li Rongde, FICMES President represented the 69th WFC Organizing Committee to talk about the planning and preparation for the Congress and to cordially invite the foundry/casting professionals to attend the 69th WFC in October 2010 in Hangzhou. President Li Rongde received the WFO flag from the representative of the Indian Foundry Society.

The 69th WFC will be very rich in content. The foundry industry experts and scholars from home and abroad will bring in the latest academic viewpoints and casting technologies as well as new results and ideas, and will give scientific outlook to the development trend of the world’s foundry industry. The five-day congress will provide a high-level exchange platform to casting professionals from various countries and regions around the world. During the congress, a series of activities, including exhibitions, cultural events, banquets, plant tours, photo-show will also be arranged, allowing the delegates to exchange information, develop new markets and meet friends through these diverse forms of activities.

Hosting the 69th WFC in China is a very important event for the Chinese foundry industry. Since the 61st WFC held in Beijing, it has been more than 10 years of rapid development. Chinese foundry industry is becoming more and more important and has a greater influence in the world foundry community. The world needs foundry development in China, and the China’s foundry industry also needs more international cooperation, meaning the China’s development is for the development of the world. The World Foundry Congress is truly the best platform for strengthening international cooperation. While casting contributes significantly to the development of human society, it also consumes a great deal of resources and causes environmental damages for our planet. The development of “Green Foundry” is a major topic that all casting professionals must pay great attention in the future. Under the influence that clean production has become the main tone of today’s industrial production, foundry production draws more attention from people and the society. Setting the theme of “Green Casting” for the congress is exactly to meet the urgent
needs of development in today’s society. This congress will play a positive role in promoting development and progress and in completing a new leap forward for the Chinese foundry industry, which will become a new milestone in the development of the Chinese foundry industry. The congress will also have an important impact on the future direction of the world’s casting technology, promote exchange and cooperation among various countries in the world’s foundry industry, and realize common progress and development.

The 69th WFC has drawn high interest and attention from casting communities at home and abroad, and received great support from domestic and international foundry enterprises and organizations. Jinan Sheng–Quan Group has demonstrated a high degree of social responsibility and active involvement, and this enterprise has made an important contribution to the development of Chinese foundry industry. Sheng–Quan Group has become the first and the main sponsor for the event, and has participated in various domestic and international conferences and exhibitions to raise the publicity of the congress.

Shenyang Foundry Research Institute, South China University of Technology, Yong–Guan Energy Technology Group, FOSECO Foundry (China) Co., Ltd. and others have provided support to the congress, and become sponsors and partners of the event. "China Foundry", "Foundry", "Special Casting & Nonferrous Alloys", "Modern Cast Iron", "Chinese Foundry Equipment and Technology", "Casting Technology", "Foundry Engineering" and "Foundry Equipment and Technology" and others have become the supporting media and publicized greatly for the congress. China Foundry Association, Zhejiang Foundry Association and the Foundry Society, Shanghai Foundry Society and the Association were also invited as co–organizer for the congress.

Concluding remarks

The opening of the 69th WFC gets closer and closer, and we will face a lot of detailed organization, publicity and preparation. Let us, with the strong support and active participation from casting professionals at home and abroad, do our best in careful organization, arrangement and preparations for the conference, and try to ensure the 69th WFC a very impressive and exciting WFC event.

We warmly invite foundry professionals from every country in the world to attend and support the 69th WFC, and we look forward to the days of get–gathering for the casting professionals. In the golden autumn of October, let us meet in the beautiful West Lake, and share the joy and harvest from the congress.

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Symposium of “Shaping and Forming of High Strength Steel, Titanium, and Light Metals” at 2010 MS&T Conference

October 17–21, 2010, Houston, Texas

Enhancing the performance of materials under extreme conditions and promoting energy–efficient materials for manufacturing processes are two critical issues for the materials community. In many cases, the shaping and forming characteristics of these alloys establishes the suitability of a new material for a particular application. This is especially true in several key industries, such as oil and gas, automobile, and aerospace.

This symposium will provide an open forum to present innovative solutions to the many manufacturing challenges of advanced materials (e.g., medium to high strength steels, nickel and titanium–based super alloys, aluminum alloys, and magnesium alloys). Abstracts are requested in the following general topic areas: structural integrity, cold and warm forming, high strain rate forming processes, modeling and theory, laser applications in shaping of sheet metals, finite element simulation of forming processes, experimental work on forming processes (including friction, and springback), full scale mechanical and fracture toughness testing, integration of scientific knowledge with manufacturing practices, and development of appropriate constitutive relationships. Management and technology experts will be invited to provide additional insight and recommendations for overcoming the current barriers and envisioning innovative manufacturing processes.

Selected papers will be published in a special issue of the Journal of Materials Engineering and Performance after peer review.

Abstracts are due by March 15, 2010 by electronic submission (http://matscitech.org/).

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