

Article no. 2: GIFA 2015 (business)

Foundry machines: high-tech solutions from a traditional industry

Global production of castings exceeds 100 million tonnes

GIFA 2015 – the 13th International Foundry Trade Fair and Technical Forum will be presenting innovative solutions for the foundry industry.

Casting processes are the only way to manufacture many functional metal parts economically – or at all. The foundry industry is a major supplier to other sectors of industry, is responsible for much of the technical progress that is made and is therefore important to many national economies. To remain competitive, it requires production resources with which operating costs can be reduced and individual strengths can be improved. The International Foundry Trade Fair GIFA 2015, which is taking place in Düsseldorf from 16. to 20. June 2015, will be providing an insight into the latest state of the art in foundry machine technology and all areas of manufacturing technology.

More than 100 million tonnes of castings, parts made from cast standard/malleable iron and steel (EST castings) or non-ferrous metals are manufactured in total all over the world every year. According to the most recent global statistics, the total volume in 2013 was 103.2 million tonnes, with the following breakdown: EST castings 84.8 million tonnes, aluminium 15.4 million tonnes and other non-ferrous metals 3 million tonnes.

Apart from political developments and their consequences, the foundry industry depends heavily on the development of the automotive industry, machine manufacturing, the construction industry and the energy market. According to figures calculated by the National



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Association of the German Foundry Industry, Düsseldorf, a good 50 per cent of the castings manufactured in Germany are, for example, supplied to the automotive industry, while just under 25 per cent are used in machine manufacturing.

Market development

At the International Foundry Forum (IFF) that was held in Venice in September 2014, the President of the European Foundry Association, Luis Filipe Villas-Boas, drew attention to uncertain geopolitical circumstances, which were reducing willingness to invest in many areas of the industry, although the non-ferrous sector was developing better than the ferrous sector. Dr Ioannis Ioannidis, Vice-President of the European Foundry Equipment Suppliers Association and Chairman of the Board of the VDMA Foundry Machine Association, shares this view, emphasising in December 2014: “Business is slower at steel and iron foundries, whereas it is developing more positively at die and permanent mould casting foundries.”

Markets

The automotive industry has always had a major influence on the geographic and technical development of the foundry sector. Dr Heinz Büchner from IKB Industriebank expects demand for castings from the automotive industry to increase in general over the next decade. Rising prosperity in the emerging markets is likely to drive growth on the car market, while stricter legal regulations about energy efficiency and emissions should lead to higher sales on the European market. From 2018 onwards, there is also likely to be substitution of EST castings by lightweight metal castings for certain parts when a switch is made to new car models. According to Dr Ioannidis, smaller and smaller engines are being developed, which need to be able to cope with increasingly high-performance operation. Foundries and their suppliers are expected to develop important components here. More materials will be combined with each other in future too. The objective is to manufacture parts with better properties but lower production costs. The foundry industry can expect high growth in the machine



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manufacturing, chemical, food and energy generation industries as well. Resource and energy efficiency will in general become a considerably more important issue.

The IKB market survey reveals that the markets for the European foundry industry will be shifting to a larger extent towards Eastern Europe and East Asia. China has become a more significant sales market for foundry machines again, which is associated with the anticipated expansion of casting capacities. In view of the political and economic sanctions and their impact on project funding, the situation in Russia is likely to become substantially more difficult. At the IFF, Andrew Dibrov, Vice-President of the Russian Association of Foundrymen, pointed out that Russian foundries needed modern equipment for such areas as casting and medium-frequency furnaces, but he also drew attention to the fact that the current political sanctions would have the effect that the business community in the country will be turning to the east to an increased extent. When Russian banks provide support to companies, Asian suppliers would then be preferred, although European manufacturers would also be commissioned when they had manufacturing facilities in Russia or Asia.

The situation in the NAFTA area, which is being reindustrialised thanks to favourable energy costs, can, in general, be considered good. A large proportion of the growth is taking place in Mexico. This development is leading to higher demand for casting production capacities and the relevant manufacturing equipment.

Recommendations

CAEF President Villas-Boas thinks that the foundry industry has strengths in the design potential it has, with which the demands made by the automotive industry for lightweight structures can be met. At the IFF, he also encouraged companies to form electronic networks that have the potential to make corporate operations even more successful and profitable. Dr Büchner recommends that manufacturers of foundry machines continue to invest in research, development and qualified staff, make ongoing reviews of the technical lead they hold, develop



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appropriate strategies and, in this context, expand such arrangements as sales co-operation agreements. He also thinks that it is very important to participate in trade fairs. Not only in the foundry machine industry are leading manufacturers working on supplying machines with technology that is customised as precisely as possible to satisfy the requirements of the users and their markets.

The GIFA 2015 trade fair

Foundries need innovative machines, equipment and software systems in order to be able to operate efficiently. The International Foundry Trade Fair GIFA, which is taking place at the same time as the trade fairs METEC, THERMPROCESS and NEWCAST that focus on associated fields and all share the same motto (“The Bright World of Metals“), will be providing information about this and the innovative developments that are being made. The exhibition programme consists of foundry plants and equipment, melting plants and equipment, refractories technology, moulding and core making plants and equipment, moulding sands and moulding auxiliaries, sand preparation and reclamation, gating and feeding, casting machines and pouring equipment, knock-out, fettling and finishing, pattern and die making, process control technology and automation, environmental protection and waste removal as well as information technology.

GIFA 2015 is being held in Düsseldorf from 16. to 20. June 2015.

The Bright World of Metals

The four international technology trade fairs GIFA (International Foundry Trade Fair), METEC (International Metallurgical Trade Fair), THERMPROCESS (International Trade Fair for Thermo Process Technology) and NEWCAST (International Trade Fair for Precision Castings) are being held in Düsseldorf from 16. to 20. June 2015. Visitors from all over the world will be coming to the city on the River Rhine for five days at this time to focus on castings, foundry technology, metallurgy and thermo process technology. A programme of high-quality additional events will again be taking place alongside the trade fairs, involving seminars, international congresses and lecture series. All four trade fairs and the programmes co-ordinated with them will be concentrating on the issue of resource optimisation and energy efficiency. A total of 79,000 experts from 83 different countries visited the stands of the 1,958 exhibitors at the previous events in 2011. Further information is available in the Internet at www.gifa.de, www.metec.de, www.thermprocess.de and www.newcast.de.

Messe Düsseldorf organises not only GIFA, METEC, THERMPROCESS and NEWCAST with the joint motto “The Bright World of Metals” but also other high-quality trade fairs for the metallurgical and foundry industries all over the world. They include FOND-EX (International Foundry Fair) and Stainless in the Czech Republic, Metallurgy India, Metallurgy-Litmash (International Trade Fair for Metallurgy Machinery, Plant Technology & Products) and Aluminium



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Non-Ferrous in Russia, indometal in Indonesia, metals middle east in Dubai, ITPS (International Thermprocess Summit) Americas and Asia and the Aluminium trade fairs in China, India, the United Arab Emirates and Brazil. The range of events held for the metal industries at the Düsseldorf location is rounded off by: Valve World Expo (International Trade Fair and Congress for Industrial Valves and Fittings) and ITPS Düsseldorf as well as the international trade fair ALUMINIUM organised by Reed Exhibitions and Composites Europe.

Further information and photos are available at www.gifa.de

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