

Article no. 2: NEWCAST 2015 (business)

Foundries: promising future with creative ideas and economic solutions

NEWCAST 2015 – International Trade Fair for Precision Castings, including NEWCAST Forum

Foundry technology involves many different processes, all of which have two things in common: metal is given its required shape while liquid and then solidifies to form a workpiece; many workpieces either can only be manufactured by a casting process or they can at least be manufactured more economically in this way than with other shaping processes. NEWCAST 2015, which is taking place in Düsseldorf from 16. to 20. June 2015, will be providing an insight into the wide range of castings that are available and the applications for them.

More than 100 million tonnes of castings are manufactured every year. According to the latest statistics compiled by the American Foundry Society (AFS), total production in 2013 amounted to 103.2 million tonnes. Cast standard/malleable iron and steel (EST castings) accounted for 84.8 million tonnes, while the rest consisted of aluminium (15.4 million tonnes), copper (1.8 million tonnes), zinc (0.5 million tonnes), magnesium (0.2 million tonnes) and miscellaneous non-ferrous metals (0.5 million tonnes). With total production of 5.2 million tonnes (4.1 million tonnes / EST castings, 1.1 million tonnes / non-ferrous metal castings), Germany came in 5th place behind China (44.5 million tonnes), the USA (12.3 million tonnes), India (9.8 million tonnes) and Japan (5.5. million tonnes). There were more than 50,000 foundries around the world in the year under review, about 30,000 of them in China.

Market development

The automotive industry, which acts as an innovation driver for other areas of industry too, has a major influence on the overall development of castings. According to calculations made by the National Association of the German Foundry Industry, Düsseldorf, a good 50 per cent of the



The Bright World of Metals

**Düsseldorf, Germany
16 - 20 June 2015**

**4. Internationale Fachmesse
für Präzisionsgussprodukte**
4th International Trade Fair
for Precision Castings

www.newcast.com



Messe Düsseldorf GmbH
Postfach 10 10 06
40001 Düsseldorf
Messeplatz
40474 Düsseldorf
Germany

Telefon +49 (0) 2 11/45 60-01
Telefax +49 (0) 2 11/45 60-6 68
Internet www.messe-duesseldorf.de
E-Mail info@messe-duesseldorf.de

Geschäftsführung:
Werner M. Dornscheidt (Vorsitzender)
Hans Werner Reinhard
Joachim Schäfer
Bernhard Stempfle
Vorsitzender des Aufsichtsrates:
Thomas Geisel

Amtsgericht Düsseldorf HRB 63
USt-IdNr. DE 119 360 948
St.Nr. 105/5830/0663

Mitgliedschaften der
Messe Düsseldorf:

 The global
Association of the
Exhibition Industry

 Ausstellungs- und
Messe-Ausschuss der
Deutschen Wirtschaft

 FKM – Gesellschaft zur
Freiwilligen Kontrolle von
Messe- und Ausstellungszahlen

Öffentliche Verkehrsmittel:
U78, U79: Messe Ost/Stockumer Kirchstr.
Bus 722: Messe-Center Verwaltung

castings manufactured in Germany are, for example, supplied to the automotive industry, while just under 25 per cent are used in machine manufacturing. The industry analyst Dr Heinz-Jürgen Büchner from IKB Deutsche Industriebank expects demand for castings from the automotive industry to increase in general over the next decade. The market report he published in September 2014 with the title “Changes in the general global conditions of the foundry industry and their impact on the foundry machine industry” reveals that rising prosperity in the emerging markets is likely to drive growth on the car market, while stricter legal regulations about energy efficiency and emissions will probably be the driving forces on the commercial vehicle market. The foundry industry can expect to receive more commissions from such areas as the chemical, food, construction and energy industries as well, however.

Automotive industry as the innovation driver

The trends affecting the relationship between the automotive industry and the foundry industry include greater substitution of parts in future, i.e. by parts manufactured from different materials or produced in different ways, in the design and assembly of motor vehicles. A study by the European Foundry Association (CAEF) entitled “The European Foundry Industry”, which included information from the IKB market report too, uses the door frame of a car as an example: the part that was originally manufactured from sheet steel by drawing has been replaced by a die-cast aluminium part, as a result of which the weight has been reduced by more than 14 kg to 4.2 kg. To reduce weight, parts made by EST casting are also being replaced to an increasing extent by lightweight metal castings, while more materials are being combined with each other too. Smaller and smaller engines are being developed as well, which are, however, expected to run consistently and reliably in increasingly high-performance operation. For these applications and for other components required in automotive manufacturing, parts are needed that have to meet exacting precision specifications.



The Bright World of Metals

**Düsseldorf, Germany
16 - 20 June 2015**

**4. Internationale Fachmesse
für Präzisionsgussprodukte**
4th International Trade Fair
for Precision Castings

www.newcast.com



The CAEF study draws attention to products that can only be manufactured with precision casting processes, such as jet engine blades with a cooling structure that is integrated in the casting operation. The study also outlines the prospects of promising manufacturing technologies with which foundries can keep up with or even advance technical progress. The integration of electronics as well as the ongoing development and use of computer-based processes in the design and manufacturing of parts, in the optimisation of operating procedures and in co-operation with customers, suppliers and other partners still have tremendous development potential. Ready-to-install parts could, for example, be manufactured from a designer's computer screen via 3D printing processes. The advances made in casting process technology and design engineering will continue to have a positive impact on product manufacturing.

International flexibility

Foundries in European countries that work for the automotive industry need to bear in mind, however, that new, larger-scale automotive facilities are generally being built outside Europe, e.g. in the USA, Mexico and China. This means that the supply chain must work on the assumption that there will be stagnation in Europe. Dr Ralph Niederdrenk from the corporate consulting company PriceWaterhouseCoopers pointed out at the International Foundry Forum (IFF) in Venice in September 2014 that companies supplying the automotive industry are reducing the number of their suppliers – including foundries – and giving preference to companies with “international footprints” when choosing suppliers. His summary: “Foundries need to follow their customers and develop international operations”, while he added that local suppliers are becoming increasingly important in the emerging markets. The CAEF President, Luis Filipe Villas-Boas, encourages foundries to form electronic networks that have the potential to make corporate operations even more successful and profitable. There are as a result numerous different ways for foundries to make sure they have a promising future by coming up with creative ideas and economic solutions.



The Bright World of Metals

**Düsseldorf, Germany
16 - 20 June 2015**

**4. Internationale Fachmesse
für Präzisionsgussprodukte**
4th International Trade Fair
for Precision Castings

www.newcast.com





The Bright World of Metals

**Düsseldorf, Germany
16 - 20 June 2015**

**4. Internationale Fachmesse
für Präzisionsgussprodukte**

4th International Trade Fair
for Precision Castings

www.newcast.com

The NEWCAST 2015 trade fair

With their products, foundries promote, among other things, the development of such innovative sectors as energy, lightweight structures and mobility. At NEWCAST 2015, the International Trade Fair for Precision Castings, foundries will be presenting their technical skills in the manufacturing field. The range of exhibits includes iron, steel, grey and malleable castings, products from non-ferrous metal foundries and various services. NEWCAST 2015 is meant primarily for designers, production managers and buyers from the automotive sector and other areas of industry that need castings for their products or supply an alternative to workpieces manufactured by other processes. NEWCAST 2015 is taking place in Düsseldorf from 16. to 20. June 2015, at the same time as the trade fairs GIFA, METEC and THERMPROCESS that feature associated fields and all share the same motto (The Bright World of Metals).

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 energy and resource 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 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.newcast.de

Press Department GIFA, METEC, THERMPROCESS, NEWCAST 2015

Tania Vellen

Phone: +49 211/4560-518

vellent@messe-duesseldorf.de

Brigitte Küppers

Phone: +49 211/4560-929

kueppersb@messe-duesseldorf.de



The Bright World of Metals

**Düsseldorf, Germany
16 - 20 June 2015**

**4. Internationale Fachmesse
für Präzisionsgussprodukte**
4th International Trade Fair
for Precision Castings

www.newcast.com

tm[®]
Messe
Düsseldorf