

Article no. 2: THERMPROCESS 2015 (business)

A market with a bright future: energy-efficient heat engineering

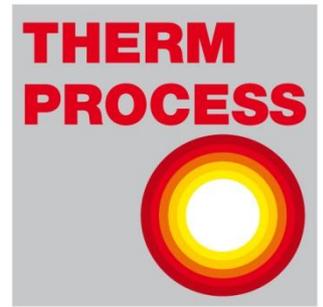
THERMPROCESS 2015 – International Trade Fair for Thermo Process Technology

Since heat is needed for numerous industrial production and processing operations, a wide range of different furnaces and equipment is available for these applications. The trade fair THERMPROCESS 2015, which is taking place in Düsseldorf between 16. and 20. June 2015, will be providing an insight into the latest state of the art in thermo process technology, focussing primarily on the metallurgical, casting and steel industries.

Thermo process technology is very complex. In connection with metals, it is required for such processes as melting, casting, sintering, hot rolling, extrusion, forging and heat treatment. What are involved here are processes to heat up, maintain the heat of and cool metal products in a solid state, in order to give them specific physical properties. It goes without saying that thermo process technology also has a great deal to do with such issues as energy and resource efficiency, environmental protection, process reliability and occupational health & safety.

Economic situation

In January 2015, the Thermo Process Technology Association in the German Engineering Association (VDMA) reported that German thermo



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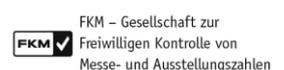
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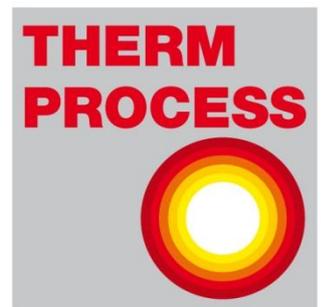


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U78, U79: Messe Ost/Stockumer Kirchstr.
Bus 722: Messe-Center Verwaltung

process technology production was 4 per cent higher in the first half of 2014 than in the same period the previous year. The orders obtained by the end of the first half of 2014 were 11 per cent up on the level recorded in the first half of 2013. More commissions were placed primarily by countries outside Germany. In mid-2014, the companies that returned the Association's questionnaire at the beginning of the year were expecting growth of 4 to 5 per cent in 2014 as a whole. In the first eight months of the year, German manufacturers of thermo process technology exported goods worth almost EUR 979 million around the world. This is, however, 26% less than in the same period the previous year. Exports to Russia slumped by as much as 42 per cent, which is attributable to uncertainty created by the changes in the general political conditions. Exports to other EU countries decreased by a total of 15 per cent, whereas exports to the USA (+ 7 per cent) and South-East Asian markets (+ 26 per cent, particularly Thailand and Indonesia) increased. China continues to be the largest market for German manufacturers of thermo process technology with deliveries worth EUR 169 million, although there was a decrease of 8 per cent from January to August 2014 compared with the same period the previous year.

Energy and raw material efficiency

In view of the variety of different thermal processes and systems, it is difficult to try and estimate figures for ongoing market development. It can in general be said, however, that demands for the economically viable use of energy and other resources have become increasingly loud in recent years and that energy has become an increasingly important cost factor at companies. In August 2014, the industry expert Janusz Kowalewski drew attention in the networking service LinkedIn to the fact that 17 per cent of industrially consumed energy in the USA is accounted for by heat treatment applications, which in turn can account for up to 15 per cent of the manufacturing costs of a product (Kowalewski: Overview of the Global Heat Treatment Industry). According to the central association of the industry CECOF (The



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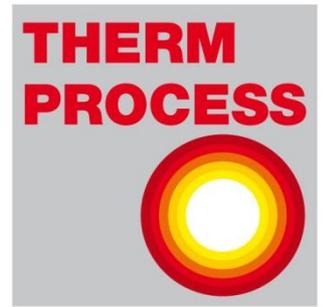
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European Committee of Industrial Furnace and Heating Equipment Associations), which represents the interests of European manufacturers of industrial furnaces and heat treatment plants, up to 20 per cent of the machines and processes used in industrial manufacturing are over ten years old and consume more energy than necessary. An obvious solution is to develop measures that reduce the energy consumption and thus costs of these facilities.

Modernisation, flexibility, customer service

Dr Andreas Seitzer, Chairman of the Thermo Process Technology Association in the VDMA, pointed out in an interview published by the Association in January 2015 that new markets are in fact being created by the options available to upgrade existing equipment. He drew attention to the fact that there is tremendous demand for the modernisation and remodelling of existing old equipment in China. The manufacturers of thermo process technology equipment are not content with modernisation projects alone, however. In the new development field, for example, great progress has been made in the control engineering sector too, so that potential savings of up to 30 per cent can be made with modern, inductively heated plants by comparison with the generations of equipment that preceded them. There is demand in addition for furnaces and equipment that offer operators more flexibility. Combined solutions, which are also known as hybrid technology and involve the linking of different kinds of heat generation, are another attractive area. Gas-fired plants with induction heating are one example here: the induction heating system enables rapid pre-heating, while the gas heating guarantees consistent temperatures in the furnace. Opposite procedure can be a viable alternative too: strong heating with a gas or oil furnace first, followed by fine-tuning – as it were – with the help of induction heating. While, finally, using the waste heat generated in production processes also has high efficiency improvement potential. A report that appeared recently in the weekly newspaper “VDI Nachrichten” reveals that more than one third of the energy consumed by industrial companies in Germany is lost as waste



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heat. The manufacturers of thermo process technology equipment can therefore expect their products and services to remain in demand, particularly since Dr Seitzer anticipates that demand for products which need to be manufactured via thermo processing will be increasing as the world's population grows.

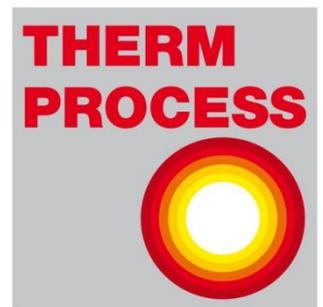
The THERMPROCESS 2015 trade fair

Energy and raw material efficiency have high priority at companies that carry out thermal processes. Modern heat treatment plants play a major role in this context. The international trade fair THERMPROCESS, which is taking place at the same time as the trade fairs GIFA, METEC and NEWCAST that feature 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. THERMPROCESS 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 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



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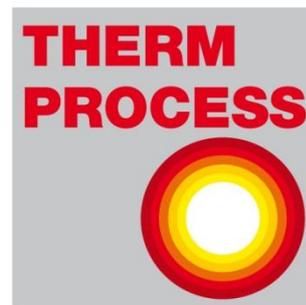


events held for the metal industries at the Düsseldorf location is rounded off by: Valve World Expo (International Trade Fair and Congress for Industrial Valves and Fittings) and ITPS Düsseldorf as well as the international trade fair ALUMINIUM organised by Reed Exhibitions and Composites Europe.

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

Press Department GIFA, METEC, THERMPROCESS, NEWCAST 2015

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