Inauguration of the European Centre for Refractories and Technical Ceramics

The European Centre for Refractories and Technical Ceramics in Höhr-Grenzhausen/DE was officially inaugurated on 19.04.2013. Various institutions (Verband der Deutschen Feuerfest-Industrie e.V. – Association of the German Refractories Industry, European Centre for Refractories gem. GmbH/ECREF, Forschungsgemeinschaft FEUERFEST e.V. – REFRACTORIES Research Foundation, Deutsches Institut für Feuerfest und Keramik GmbH/DIFK and Forschungsinstitut für Anorganische Werkstoffe – Glas/Keramik – GmbH/FGK) are now based at the Centre. The Centre was a joint project of the Ministries of Economics, Science and the Interior, the local authorities in the German state of the Rhineland-Palatinate and project promoters with an investment volume of around EUR 13.5 million. The Centre was financed primarily by the European Fund for Regional Development (EFRE) and co-financed by the German state of the Rhineland-Palatinate and the local players.

Numerous representatives from industry, science as well as European, state and local politics attended the opening ceremony, including Eveline Lemke, Minister of Economic Affairs, and Doris Ahnen, Minister of Science, in the German state of the Rhineland-Palatinate (Fig. 1). The road from the first idea of a shared innovation centre to its realization, which was made possible thanks to the commitment of its many supporters, was explained by Prof. Dr Peter Quirmbach, Managing Director of ECREF. He made it clear that the new Competence Centre will focus on innovation itself. In his welcoming speech, he said: “The concept ‘Innovation’ is certainly one of the most overused terms in the modern day, like,

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**UNITECR 2013**

**Keynote Speaker**


**Plenary Speakers**

Tom Vert, General Manager Primary Manufacturing at ArcelorMittal Dofasco: „How do Steelmakers Pick Refractories – Logic, Emotion or Dartboard?“

Charles E. Semler, President/Consultant, Semler Materials Services: „Trends for the World’s Most Important, but Least Known Products“

**UNITECR 2013, Victoria/CA, 09–13 Sept. 2013**

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for example, ‘efficiency’ at the current time. It is therefore all the more necessary to give it, innovation, a sense of its own based on a distinct interpretation rather than to surrender to the belief, innovation is something abstract or simply means something new.

In fact it is a matter of taking synergies and structures as a basis to define all relevant factors for the enterprises in an industry and at the same time to further develop an interlinked strategy. A comprehensive and very interesting understanding of innovation was developed by Joseph Schumpeter, which I should like to share: the world famous economist maintained that invention alone is not innovation, but that innovation is the technical and organizational innovation in processes. For him, the creative enterprise or the creative entrepreneur symbolizes innovation in that the enterprise or entrepreneur searches for new fields of activity, thereby driving the process of creative destruction. This means getting rid of “old ways and customs” in order to make “new advantages” possible.

If, however, the application of new methods or tools is the motivation for the action, this can only happen by generating knowledge or linking it with new patterns and passing it on with appropriate means of communication to those who should have the benefit of it, namely the companies that, for instance, are organized in a trade association.

This clearly indicates that we are ultimately talking about a collective need for knowledge and accordingly a collective innovation movement. For the community, it is then important that:
- it must find out about the innovations,
- it must be convinced of the innovations,
- it makes a conscious decision for the innovations,
- it sensibly integrates the innovations in its own structure, and
- it continues to use or reverse the innovation decision.

This list makes it abundantly clear that it is a matter of interaction between the companies and a centre like the one we are setting up here today. Both sides therefore contribute something essential to the success of innovations.

The platform on which this takes place is the systematic application of the knowledge triangle between EDUCATION-RESEARCH-INNOVATION. Only if these three aspects complement each other and permanently learn from each other will a knowledge and innovation community evolve from this which can successfully establish itself on the market.

And this is the reason why we are building this centre, to venture and design, take up and realize new ideas, to be creative and productive and to work together dynamically with the companies active in the REFRACTORIÉRS knowledge and innovation community to achieve common, long-term progress”.

Prof. Dr Ralf Diedel, Managing Director of FGK, emphasized that thanks to the extension of the FGK with test, project and laboratory facilities as well as new technical possibilities, ground-breaking technologies can be developed and companies in the materials engineering sector supported in the decade to come. From powder synthesis and raw materials preparation to the sintering processes, a closed process chain is now available in a central location, enabling development of the focuses on technical ceramics and mineral resources.

On a tour around the facilities of the ECREF and the FGK, the guests were able to find out about the new acquisitions and technical facilities of the two institutes. In future, these will form an important focus within the Bildungs- und Forschungszentrens Keramik e.V. (BFZK – Education and Research Centre for Ceramics) in Höhr-Grenzhausen.

India
RHI Acquires an Additional 26 % in Orient Refractories
Following the acquisition of 43.6 % of the share capital of Orient Refractories Ltd. (ORL)/IN from the core shareholders in early March, RHI/AT has completed the mandatory open offer for an additional 26 % of the ORL shares. As of 29 April 2013, RHI thus holds 69,6 % of the voting rights in ORL. The transaction price to acquire the 69,6 % stake totalled roughly EUR 50 million.

Great Britain
The Refractories Industry Worldwide 2012–2017
A new market report that provides with over 400 pages and featuring 275 tables and figures comprehensive data on the global refractory industry has been published by Materials Technology Publications®GB. It examines the current situation and future prospects for the refractories industry worldwide, providing comprehensive data on production, consumption, international trade and growth rates for the refractories industry, its raw materials suppliers and its end-user markets. Current steel production and forecasts through to 2017 are analysed in the report by region/major producing country. While the short term outlook is one of low growth because of the global economic situation, the report predicts that there will be an upturn in the second half of 2013, with realistic and sustainable growth in steel production and in other key end-user industries through to 2017.

Specific consumption of refractories per tonne of steel has fallen to about 7,8 kg in Japan and about 10 kg in Europe and North America, mainly due to the use of higher quality refractories with longer in-service life cycles; further declines in consumption are likely to be slow and modest in these countries/regions. In China, however, the consumption of refractories per tonne of steel is much higher, estimated to be around 23 kg.

The report predicts that there will be considerable declines in the consumption of refractories per tonne of steel in China over the next five years as the Chinese steel industry moves to more sophisticated refractory materials and advanced steelmaking practices. Beside the dominant steel industry (approx. 70 %) further end-user sectors are cement, glass, ceramics and non-ferrous metals. While these consume lower amounts of refractories than the steel sector, their influence on the refractories industry is considerable, and there are numerous refractories manufacturers that offer high value products specifically tailored for these sectors. The report analyses refractories usage in the production of cement, glass, ceramics and non-ferrous metals, with statistical data on consumption and forecasts for growth.

Total world production of refractories was estimated to be 41,5 Mt in 2012, valued at EUR 25 billion. The largest portion of this was in China, with production estimated at 29,5 Mt, valued at EUR 14,3 billion. China is also a significant supplier of raw materials, most notably refractory bauxite, magnesia, graphite, brown fused alumina and silicon carbide, though export restrictions have reinvigorated development of non-Chinese supplies of key raw materials, such as magnesia. Trade (import/export) patterns for both raw materials and finished refractories are analysed in the report.

The European Union (EU) is the second largest producing region, with an estimated production of 4,1 Mt of refractories in 2012, valued at EUR 3,9 billion, followed by North America, with 1,4 Mt in 2012, valued at EUR 1,4 billion. The report forecasts that refractories production worldwide will rise to 46 Mt by 2017, with a value of EUR 29 billion. The report breaks down forecasts by region/major producing country. The refractories industry has been growing through a long period of consolidation, particularly within Western countries; in China and other developing economies this process is still at an early stage. Outside of China, about 70 % of sales of refractory products are made by the world’s 10 multinational refractory companies, and all of these companies also have operations in China. There are numerous opportunities for international refractory companies in developing regions, particularly through joint ventures. The report includes profiles of the world’s major refractory manufacturers, giving their size, market...
share and product range, with financial results. Raw materials suppliers are also listed, along with a variety of specialist refractory companies. In total, over 180 companies are profiled. www.mat-tech.co.uk

Great Britain
Mayerton Announces Divestment of Production Facility in China
Mayerton Holdings Ltd, a leading refractory engineering solutions provider and a high-quality castable and refractories brick manufacturer, announces it has signed a definitive agreement for the sale of its 100% equity interest in Dalian Mayerton Refractories Co. Ltd (DMR) to Magnesita Refratarios S.A. DMR is a refractory brick manufacturing facility in Dalian, China (Liaoning Province).
The divestment of DMR will support Mayerton’s strategy to optimise capacity at its remaining production facilities and focus resources on performing and service/support in addition to product diversification. The divestment does not impact Liaoning Mayerton Refractories Co. Ltd (LMR) where it retains sufficient capacity to manufacture in excess of its current volume of refractory bricks. The application for approval of the transfer of the equity to Magnesita will be submitted to the Economic and Trade Bureau of Dalian Development Area in the People’s Republic of China. Mayerton expects that the approval and consequent completion of the acquisition will occur in Q3 2013.

Austria
RHI: Chapter 11 Proceedings of the US Companies Deconsolidated in 2001 Completed
On 11 March 2013, the competent district court confirmed the decision of the bankruptcy court regarding a settlement with all insurance companies successful in the appeals proceedings. After expiry of the objection period and the fulfillment of conditions precedent, the reorganization plans of the US companies have entered into force with effect from 30 April 2013. This has been announced to the bankruptcy court.
Consequently, the Chapter 11 proceedings of the companies deconsolidated as of 31 December 2001 and the associated asbestos-related claims for damages have been definitively completed with full legal security after eleven years. RHIAT receives a payment of USD 40 million from the former owner of one of the US companies.

Germany
Susanne Klatten: New Chairperson of SGL Carbon Supervisory Board
During the Annual General Meeting of SGL Carbon SEDE, a total of 10 new members were appointed to the Supervisory Board, including four shareholder and six employee representatives. At the constituent meeting following the Annual General Meeting, the new Supervisory Board appointed entrepreneur Susanne Klatten as the new Chairperson, as proposed. Susanne Klatten has been a member of the Company’s Supervisory Board since 2009. S. Klatten succeeds Max Dietrich Kley, who had been Chairman of the Supervisory Board since 2004.
Dr Christine Bortenlänger, Chief Executive of Deutsches Akteninstitut e.V. (DAI)/DE, was elected for the vacant shareholder representative mandate. In addition, three shareholder representatives were reappointed: Dr Daniel Camus, CFO of The Global Fund, and Dr Hubert Lienhard, Chairman of the Board of Management of Voith GmbH, for a term lasting until the 2018 Annual General Meeting as well as Andrew H. Simon, advisor and supervisory board member to a number of companies, for a term lasting until the 2015 Annual General Meeting.

Germany
German Steel Federation Warns against Back-loading of CO2 Certificates
Hans Jürgen Kerkhoff, President of the Düsseldorf-based German Steel Federation, warns against “back-loading”, that is delaying the sale of CO2 certificates, which is being discussed in the European Parliament: “Within the framework of emissions rights trading, the European steel industry is being confronted with limits that are beyond what is technically feasible. It will therefore have to buy in a considerable number of additional certificates. A high certificate price aggravates this burden, damages international competitiveness and will adversely affect future investments – including investment in climate protection.” In addition, he said, the subsequent back-loading of certificates would undermine confidence in emissions rights trading and the further endanger the industry’s long-term planning and investment security. “The emission goals of the trading system are met irrespective of the certificate price,” Kerkhoff reminds us. He fears that the decision on back-loading would be influenced by the wrong motives. “Emissions rights trading was created for reasons of climate protection, not as a source of government revenue. Anyone in Germany hoping that back-loading will bring higher revenue for the Energy and Climate Fund is diverting this instrument from its intended use.

Worldwide
World Steel Association: Short Range Outlook
The World Steel Association (worldsteel) released its Short Range Outlook (SRO) for 2013 and 2014. Worldsteel forecasts that global apparent steel use will increase by 2.9% to 1454 Mt in 2013, following growth of 1.2% in 2012. In 2014, it is forecast that world steel demand will grow further by 3.2% and will reach 1500 Mt. The worldsteel Economics Committee met 6–7 April in Düsseldorf, Germany. Commenting Hans Jürgen Kerkhoff, Chairman of the worldsteel Economics Committee said, “2012 was a challenging year for the steel industry with apparent steel use increasing at the slowest rate since 2009 when demand declined by –6.5%. This was mainly due to the Eurozone crisis which persisted throughout 2012 and whose impact was felt further afield. On top of this, corrective macroeconomic measures in major emerging economies also contributed to a concerted slowdown globally. However, in the early part of 2013, the key risks to the global economy – the Eurozone crisis, a hard landing for the Chinese economy, and the US fiscal cliff issue – have all stabilised considerably and we now expect a recovery in global steel demand to kick in by the second half, led by the emerging economies. Yet, the situation on the financial markets remains fragile and the Eurozone crisis is far from being solved as the recent events in Cyprus have again shown. In 2014, we expect a further pickup in global steel demand with the developed economies increasingly contributing to growth.”
Apparent steel use in China is expected to grow by 3.5% in 2013 to 668.8 Mt following a 1.9% increase in 2012. In 2014, steel demand is expected to grow by 2.5% as the Chinese government’s measures to control investment in an effort to re-balance the economy will remain in place. In India, steel demand is also expected to pick up and will grow by 5.9% to 75.8 Mt in 2013 following 2.5% growth in 2012 as monetary easing is expected to support investment activities. In 2014, growth in steel demand is expected to further accelerate to 7% thanks to the reform measures aimed at narrowing the fiscal deficit, coupled with measures to improve the foreign direct investment climate. Steel demand in Japan is expected to decline for the sec-
Growth to reach 70 Mt supported by strong command in the region will further accelerate to 7,1% to overcome oil turmoil in the region phases out. In 2014, steel demand in the Arab Spring countries and Iraq as political turmoil in the region phases out. In 2014, steel demand in the Arab Spring countries and Iraq.

42,9 Mt in 2013 and will grow further by 3,9% to 49,8 Mt with the improving external environment. The resumption of energy projects is expected to rebound by 6,2% in 2013 to 49,8 Mt from 2,6% growth in 2012. The region’s steel demand is forecast to grow by 4,3% to 52 Mt in 2014. In Brazil, a rebound in investment coupled with the end of the recent de-stocking process is expected to bring apparent steel use growth of 4,3% to 26,2 Mt in 2013 and further growth of 3,8% to 27,2 Mt in 2014.

In EU27, the lingering uncertainties associated with the euro crisis continued to weigh heavily on economic activities in the region, especially during the last quarter of 2012. As a result, apparent steel use in 2012 fell by –9,3% with a widening gap seen at the country level. In particular, in Italy and Spain, apparent steel use contracted over –18% in 2012. With signs of stabilisation in the economic situation, recovery is expected late 2013, but the economic prospects for the region remains weak. Steel demand in EU 27 is expected to contract further by –0,5% in 2013, but will return to growth of 3,3% in 2014 to reach 144,1 Mt.

Growth of apparent steel use in the CIS region is projected to slow to 2% reaching 57,6 Mt in 2013 as the modest pickup in Russia is partially mitigated by declining demand in Ukraine and Kazakhstan. In 2014, steel demand in the region is expected to grow by 3,8% to 59,8 Mt with the improving external environment. The resumption of energy projects and improving construction outlook is expected to support steel demand in Russia. It is forecast that steel demand in Russia will grow by 2,6% to 42,9 Mt in 2013 and will grow further by 3,9% to 44,6 Mt in 2014.

Steel demand in the MENA region is expected to grow by 3,2% to 65,2 Mt in 2013 after 2,2% growth in 2012 aided by reconstruction activities in the Arab Spring countries and Iraq as political turmoil in the region phases out. In 2014, steel demand in the region will further accelerate to 7,1% growth to reach 70 Mt supported by strong construction activities.

Ukraine

Magnezit Group Launches New Line for Fluxes Production

Magnezit Group has successfully launched a technological line in the framework of the project for organization of magnesia fluxes production with annual capacity of 50 000 t at Panteleymonovka Refractory Plant in Gorlovka/UA. Production facility was organized from zero point and will reach designed capacity in 2013. First pilot batch of uniform refractories of grade PANSLAG P71 (briquetted magnesia flux) of Panteleymonovka Refractory Plant has successfully passed full-scale industrial tests.

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Following equipment was installed: weighing car, 30 bunkers, three mixers Enich/DE, and six dosing units for liquid material. Assembly works of the dosing line equipment is done by specialists of the company-manufacturer. In early April they began commissioning works. New weighing equipment allows to improve quality of preparation of masses for production of magnesia-carbon bricks of multicomponent composition and to optimize the technology of production of novel and existing grades of bricks. In the nearest time it is planned to begin reconstruction of thermal kiln drying chambers, installation of a new system of feeding of drying agent (hot air), introduction of automated system of thermal unit control. It is planned to commission the new production facility in the middle of 2013. Implementation of the project will result in increase of magnesia-carbon refractories production by the year 2016 up to the level of 25 000 t annually.