MagForum 2017 analysed the latest magnesia issues and markets, as well as spotting any potential newcomers to the industry.

B eautiful Kraków was the location and backdrop to IMFORMED’s MagForum 2017, held from 11-14 June at the Radisson Blu Hotel in Poland. The networking event attracted 190 attendees who were treated to panel discussions, an organised field trip and 23 presentations covering the full spectrum of magnesia mineral supply and demand.

Chinese issues dominate the market

Following an introduction to the magnesia market by Mike O’Driscoll, IMPFORMED director and welcome address from Jerzy Gidula, sales director at ZM Ropczyce, all eyes and ears were on the panel for nearly an hour of thought provoking discussion on the industry’s most pressing issues.

The panel discussion, with participation from the audience, was dominated by the significant influence of China on the magnesia market and the latest issues arising there.

These included the demise of the export licence system, government controls on pollution in liaising and restrictions on dynamite provision negatively impacting output, China’s relationship with the WTO, the influence of the Chinese magnesia sector, infrastructure, and the steel industry.

“There is much anxiety and confusion. It was China then, and China now...” summed up Michael Tsoukatos, business development director at Grecian Magnesite SA. This was echoed by Andreas Krögl, head of raw materials supply, RHG AG, Austria, who considered that “we are still in the middle of the game.”

Evandro De Souza, marketing director for overseas markets, ZM Ropczyce, considers that we may need to wait until the end of 2017 or even early 2018 for things to settle down and take stock of the situation.

James King, a UK steel consultant, highlighted the relevance and comparisons within the steel industry, opening that while output was rising, steel prices were too low. He also reminded that refractories were still perceived as “not a critical cost, at just $5-6/tonne of steel production” – despite, of course, the use of refractories being imperative for successful steel production.

Refractory market and magnesia use evolution

In ‘The changing face of the global refractories industry’, Dr Richard Flock, managing director at Morstan Resources Ltd, Australia, covered a wide range of factors shaping the refractories industry today and tomorrow, including megatrends, materials engineering, energy, economy, chin and cement.

Flock considered that the industry had reached “peak refractories” and that refractory customer issues would focus on decarbonisation in steel, cement and glass; alternative fuels; pollution; chinese customer competition; composites for lightweighting; customer overcapacity; low profitability/ automation; and decreasing specific consumption.

Refractory producer actions of the future would be centred on cost reductions; automation; recycling; consolidation (China and elsewhere); innovation; monolithics; 3D printing of shapes; clean steel; and increased flexibility and ability to identify and respond to customer’s changing needs.

At present, 36,000tpa of CCM is produced from the plant at Madinah, which hosts a 40,000tpa capacity MHI with integrated milling, and until June 2017, a dormant 32,000tpa capacity pressurised vertical shaft kiln and integrated mixing plant.

Ganagia’s plan is to increase production, develop customer products, decrease costs, and increase reserves. This includes production of DBM starting in June 2017, leading to a planned output level of 32,000tpa of low SiO2, 93-98% MgO, and 3.0-3.30 g/cm3 DBM.

Ganagia acknowledged delays in restarting the VSK owing to a “huge refractory problem” and confirmed that all the repairs of the original bad design in control air, fuel flows, and discharge system are now ready and in working order.

Furthermore, the new mining plant is to be on-stream in July 2017 and producing 36,000 tpa monolithics using DBM.

Moving on to Australia, Andrej Karpinski, executive chairman of Korab Resources, presented an interesting paper entitled ‘Development of the Winchester magnesite deposit Northern Territory, Australia’. Korab Resources, a subsidiary of AusMag, is focused on commercialising the Winchester magnesite deposit located near Darwin in the Northern Territory.

AusMag has a heads of agreement signed for a 1.5 million tonne offtake (300,000 tpa over five years) and is in advanced discussions with several other parties.

Karpinski emphasised that the initial focus is on just producing raw magnesite, with a very high CAFEX required of US$50, and the project is just $85m from Darwin port.

“The mine can operate at a profit with magnesium carbonate prices as low as US$40/t.” said Karpinski.

“Refractories are a minor cost for a steel producer. When profit margins are only a few dollars per tonne, every dollar counts”

Somra Larasaggte, technical marketing manager at RHG, Austria, explained the different washing processes and how DBM maybe used in fluxes and electrodes in her paper “Dead burned magnesia qualities for the welding industry.” RHG offers two grades of DBM for welding, sourced from Turkey and Austria, based on cyanotrichite and macrotrichite magnesites, respectively.

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