Spanish refractory producer and dunite miner looks on the bright side of the global economic slowdown

Laura Syrett

Spanish minerals company, Pasek, is an integrated family-owned business headquartered in Asturias, northern Spain. Founded in the 1960s, the company has two business lines—one linked to the refractory sector (Pasek Minerales) and the other to the mining industry (Pasek Minerales). Pasek España, a leading refractories company in Spain, has its own manufacturing facilities located in Asturias. Through this division, Pasek is able to both supply products and perform the installation and maintenance of refractory materials in plants for industries such as steel, aluminium and power generation.

Pasek Minerales is an international business line which extracts and commercialises a magnesium silicate rock, dunite. Its core markets are in Europe and it has recently started operations in North and South America, Africa and Asia. “We saw the economic and financial crisis suffered in Europe during the last five years as an opportunity for improving our position in the market,” Pasek’s commercial director, Enrique Somolinos*, told IM.

“We have pursued significant geographical growth in Europe, USA, South America and Asia, where we have increased our international market share from 20% up to 70%, in some sectors,” he continued, adding that: “For us there was no option but an important international growth, as the Spanish market was significantly suffering.”

Both blast furnace and electric arc furnace steel-manufacturing are Pasek’s main target sectors, although in recent years the company has developed products for several emerging markets, such as insulation, fertilisers, fire extinguishers and certain environmental applications.

Minerals

Pasek sources its own raw material from two dunite mines in Cabo Ortegal, Galicia, in north-west Spain, which were brought online in the 1970s during a time of significant expansion in Spain’s steel industry. “Our two open pit mines are situated on a magnesium silicate deposit, with over 600m tonnes of proven reserves of homogeneous dunite,” Somolinos explained.

The mine has a current yearly production level between 700,000-900,000 tonnes, “but this can easily be doubled, without the need for large investment, should the market demand require it,” Somolinos explained.

“From the logistics point of view, the mine is conveniently located just 7km from the Port of Cariño, which is almost fully dedicated to dunite, from where our mineral is shipped to customers in Germany, France, Italy, Belgium, USA and many other parts of the world,” Somolinos said.

Dunite

Dunite, a magnesium silicate rock, is an igneous, ultramafic rock made up of orthopyroxene, clinopyroxene and is a major source of olivine, of which it consists in variable proportions, although its typical mineral assemblage is more than 90% olivine.

Its grain size is medium to large (coarse), equigranular, with frequent mesh textures on primary minerals and secondary paragenesis. The steel industry is the principal consumer of dunite, where it can be used as an alternative to magnesite in a number of applications owing to its magnesium silicate composition.

The highest volumes of dunite are used in blast furnace steel making, where its MgO-bearing properties effectively act as fluxing agent and slag conditioner on the pig iron manufacturing process. Electric arc furnaces also consume dunite in the form of tap hole sand, which keeps molten steel in the furnace between heatings; other uses include refractory manufacturing, construction markets and gravel.

Refractories

According to Somolinos, the key to being a successful refractories producer in a competitive market is the ability to innovate along with the changing needs of consumers.

One of Pasek’s biggest competitive advantages is the flexibility to produce different grain sizes of dunite material, which help the company to adapt to customer specifications.

“Because customer requirements have developed, we have evolved from our original offerings of 8/40mm and 0/3mm grain sizes for the blast furnace and sinter processes, to produce a whole range of grain sizes, from 0/150µ and 0/300µ up to 10/40mm and 80/150mm grains,” he said.

“The best part is that, no matter which grain size, there is no physical transformation of the product, as the rock is just crushed and sieved at our plant that is located on the mine site,” he added.

In addition to developing new products for insulation, fertiliser and environmental markets, Pasek has also recently focused on diversification into sectors such as glass, wood, paper, copper and aluminium.

“We have dedicated R&D efforts to the investigation of new applications of dunite, with really good results; market penetration in the rock wool sector is a recent example,” Somolinos said.

He acknowledged that times have been hard for the refractories industry in recent years, but said that Pasek was seeing signs of a slow but steady recovery in its markets, compared to the last four years.

“We see that companies which have dedicated the largest amount of time and effort to innovation (in production, commercial and logistical capabilities) and to improving their presence in strategic markets are the ones starting to recover. These are the companies that have been able to increase margins and market shares,” he said.

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