Rare Earths - Business as Usual?

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What happened to all the concern and discussion about Rare Earth (RE) materials? The fears about shortage of supply, the need to reduce (or replace) RE metals and the pains of volatile pricing. Well, it looks like we are back to 2008 - and business as usual.

That was the year when Molycorp Materials acquired the Mountain Pass mining and processing operations from Chevron, with a plan to break the Chinese dominance in the supply chain, and to become the low-cost, environmentally responsible producer of RE products.

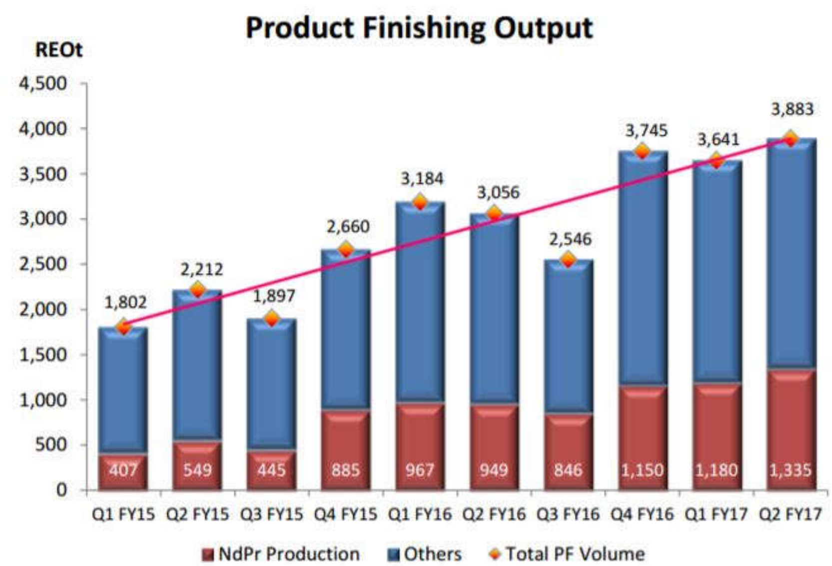
Recently I saw the chart above which seemed to describe a lot of the recent history, concerns and activities, and possibly explains why the discussions have subsided - or at least returned to the level they were at in early 2008. The chart produced by

Asian Metal shows the historical pricing of neodymium metal (FOB China) from 2005 to January 2017

This chart is typical of RE oxides or metals, and even though the actual dollar values may not be representative of all points of supply, the trend is what you should be looking at. The shape of this curve (and particularly the timing) is reflected in all sorts of related charts, from the stock price of companies involved in RE production, to the frequency of RE stories in the mainstream press. It shows that prices are now recovering to 2008 levels, or in some cases lower if you factor in 13+% from nine years of inflation. Graphs with a similar shape but shifted a little in time would be the research and development efforts to reduce and replace - both industrial and government supported.

A lot of things have happened in the intervening years, Molycorp has come and gone without apparently having any significant effect on pricing, Lynas is still with us and has almost doubled output (to nearly 4000t REO per quarter) in the last two years,

Lynas REO output by Quarter.



but still seem to be struggling with cash generation. The cries from the fledgling RE companies about the "crash" in RE prices harming their business were - and still are - amusing since business plans were put together well before the price spike. Many consumers of RE materials have found ways of reducing their reliance on them either through redesign or the use of alternative materials, and RE magnet manufacturers have made big strides in reducing the need for the very expensive,

heavy RE metals used in high performance grades. The research rush into alternative RE free magnet materials appears to be winding down, with little of commercial interest to show for it.

So what does that simple price chart say about supply and demand? It probably says that the laws of supply and demand will take care of everything - and that the spike had very little to do with either supply or demand. Because the RE materials market is relatively small, speculation involving storage of RE metals in warehouses, which looks like a sudden increase in demand, had exactly the desired effect on pricing. With prices of some RE metals (in real terms) lower than in 2008, there is still room for significant increases without causing any major issues. If prices rise without any additional supply, then maybe the "low end" applications such as clasps, toys and tiny fridge magnets will move to other materials and release that quantity of RE back into higher value applications. Even though there is general agreement about market growth this hasn't been reflected in price - which makes it just as susceptible to speculation as it was in 2010 / 2011. With RE prices expected to rise in the latter half of 2017, I just hope that it is a gentle increase and nothing that speculators could pump up into another shortage story.

And for those of you that like the "price stability" of samarium, and think that SmCo magnets are the way to avoid price volatility, here's something to consider.