

Rising tensions in the Pacific suggest China will ignore WTO ruling on rare earths



Whatever bilateral relations improvements were achieved in the past two weeks between Japan and China, they are sure to rise again as the World Trade Organization prepares to rule against Chinese

quotas on rare earth exports. The formal decision will be delivered on Monday, March 24 and it will be motivated by the conclusion that China has “given preferential treatment to its domestic industry”. The WTO is expected to propose that China limit its own domestic production, should the quotas be motivated by the need to preserve resources. China may appeal the ruling and will have 60 days to do so but this period will likely only serve to heighten tensions with Japan and other neighbors.

“China will vigorously defend its sovereignty” warned China’s minister of Foreign Affairs, Wang Yi. He said that there was “no room for compromise “with Japan on the territorial and historical issues. China is engaged in a series of territorial disputes with many of its neighbors but the first and foremost of these is with Japan, over the sovereignty of Tokyo in uninhabited islands in the East China Sea, known as Senkaku to

the Japanese and Diayou to the Chinese. The tensions between China and Japan – even if somewhat eased over the past week as Japan has joined the search effort for the missing Malaysian Airlines Boeing 777 (flight MH 370) – are heightened by China's memory of the invasion by the Japanese military during the Second World War.

Chinese officials have recently demanded that the Japanese leaders to confront "militaristic past" of their country and make amends in the same way as Germany after Nazism. The Japanese Prime Minister Shinzo Abe, meanwhile, warned his country that the territorial dispute over the Senkaku with China evoked the geopolitical tensions that had led, in 1914, to the outbreak of the First World War. He is not altogether wrong; after all there was intense trade between Germany and Britain or between the United States and Germany (among others). Therefore, even lively commercial relations can be trumped by nationalism. In Japan, however, the tensions have had some direct trade effects, especially insofar as rare earth elements are concerned.

Yet the rare earth market situation is somewhat different than it was when the WTO dispute between China and Japan (along with the EU and the United States) came to the fore in 2011-2012. China's market share in rare earths has decreased noticeably. In 2010, China had a market share of almost 98% – a monopoly – now there is some competition on the way. Tasman Metals (TSXV: TSM | NYSE-MKT: TAS) could be ready to start deliveries of heavy rare earths to Europe and other markets from Sweden in 2017. In North America, such plays as Rare Element Resources ('RER', TSX: RES | NYSE MKT: REE) could also come on line with heavy rare earths around the same period and all the while, Molycorp and Lynas have been producing and increasing sales of their light rare earths in California and Malaysia. Still, for the time being, China will continue to dominate the production of crucial rare earth products and its enormous market power.

China will become a victim of its own success or market dominance; indeed, the strong rise in rare earth prices in 2011 – in response to the Chinese quotas – has prompted an intense search for sources outside China – and dozens of new deposits have been discovered worldwide. However, China may prompt further demand by stressing the defense and security aspects of rare earths. The continued tensions with Japan will certainly sustain recent Chinese military ambitions. China has announced a new double-digit increase in military spending for the year 2014.

The Chinese Ministry of Finance, in turn, announced on March 4 that a 12.2% increase in the budget of the People's Liberation Army, bringing it to 808.23 billion Yuan or about USD\$ 140 billion. However, the Pentagon, rather concerned about securing reliable sources of critical minerals for itself, claims that the real Chinese military budget is much higher than reported, estimating it to be closer to 240 billion dollars. Most of the funds will be used to upgrade naval and air forces and to develop unspecified "high technology" weapons, presumably, the kind that makes intense use of electronics and therefore, rare earth intense components. Certainly, rare earths and similar critical minerals such as beryllium yttrium and scandium will be used to develop China's 'fifth-generation' stealth aircraft, the J -20 and J- 31, the Lijian and experimental glider program called " WU- 14" . In addition, Beijing is also developing anti-satellite weapons, a supersonic cruise missile and a ballistic anti-ship missile.

Last November, the US- China Economic and Security Review Commission, established by Congress in 2000, argued that the rapid modernization of the Chinese military was "changing the security balance in the Asia-Pacific" and announced "difficult decades" for US military preeminence in the region. In fact, the Pentagon is concerned that by 2020, Chinese naval and air forces may reach the size and capability of those deployed by the United States in the Asia -Pacific region, which will

certainly raise the concerns of its regional allies (including Japan, the Philippines, Indonesia, and South Korea among others) in the region. Chinese military spending will likely translate to more military exercises, many of which may be expected to be planned in and around the disputed Senkaku/Diayou islands, fueling rather than loosening tensions with Japan, which has already responded by increasing its own spending on defense – 5% over the next five years with a total budget of about USD 200 billion for the period 2014-2019. Beijing needs to reduce production to keep production for its own industries and will not hesitate to continue to use its monopoly position to blackmail its neighbors, which will be ever more motivated to find alternative sources.

In this highly charged military and geopolitical context, WTO or not, it is unlikely that China will simply abide by the expected ruling urging an ease of rare earth trade restrictions. At this point, there are serious strategic considerations. China may exploit its intense pollution and environmental degradation to preserve rare earths needed to produce alternative energy sources and to cut back on highly polluting extraction procedures for these materials. Meanwhile, there are no commercially viable processes for recycling rare earths, despite the claims, or alternative materials to rare earths and such metals as dysprosium, which was a mere curiosity until the 1960's, will be in ever greater demand for its use in several military applications not to mention its use in permanent magnets to make ever more popular electric cars.

The rising Chinese nationalism and militarism will only serve to force the West and its allies to diversify their supplies. The Chinese hegemony will last for a few more years until new sources come online – and InvestorIntel has published several articles outlining the most promising of these. The slump in rare earth prices seen in 2013 has not taken into account China's rise as a military power, rather than simply an

economic one, or the fact that there just might be another technological revolution around the proverbial corner to cause an immediate increase in demand. Issues of rare earths are economical because they represent a lucrative market, but they are becoming increasingly strategic.

#TMS2013: Sustainable Access to Rare Earths is critical to National Security

☒ Shortages of rare earth elements limit the United States' ability to produce the defense systems of the future. China does not have a geological monopoly on rare earths but it has been allowed to develop a production monopoly while the developed (and allied) nations gradually gave up rare earth mining in the late 1980's and 1990's. China's dominance in rare earths production has been facilitated by comparably shoddy environmental mining standards and lower costs.

This leaves US industry and defense technology exposed to rare earths supply risk.

Rare Earth mining is complex and the development of new resources to offset Chinese trade restrictions is necessary. The Pentagon has rightly expressed concern that the US defense industry is vulnerable to the current logic of Chinese dominance in the rare earths market. The fact that many current civilian technologies share components and engineering with civilian ones also creates complex logistical issues. Sub-contractors supply many essential components that are dual use, making it more difficult to manage the sourcing process. Ultimately, the biggest vulnerability for the defense sector

is that when there is a shortage of rare earths, one cannot simply look up the next supplier in the roster; time and investment are needed to secure a dependable domestic rare earth supply is considerable. A new approach is needed. Short of developing alternative materials, it is time to consider easing the mining regulatory framework to help promote rare earth production in North America and other more reliable jurisdictions.

At the end of 2012, the DOD took steps to start addressing some rare earths supply risks, aiming toward greater self-sustainability. It signed a series of special contracts with US based potential producers of neodymium-iron-boron magnets and equivalents from the raw supplies to the finished product. The DOD, therefore, has been trying to reduce its vulnerability to the whims of national and corporate material and technology producers. The DOD has suggested stockpiling of critical minerals as a solution, but while this is valid in scope it is flawed in execution. The Strategic Materials Advisory Council (SMAC) fears the DOD is still limited to China as the source for the time being. SMAC favors more encouragement for US mining and industry in securing these critical materials locally or in allied countries.

The relationship between defense and security needs and the demand for rare earths and critical elements as just described will be addressed by the #TMS2013 panel entitled: *"Self-Sustainability and the Impact of Strategic Materials on Defense Needs: missiles, space vehicles, aeronautics, ammunition, navigation equipment."*

James B. Hedrick, President of Hedrick Consultants Inc and Sr. Editor, REEHandbook.com will moderate the panel. James is uniquely suited to discuss issues related to strategic minerals and the defense sector. He served as the rare-earth commodity specialist for the US Geological Survey for 31 years. He has studied all aspects of the rare-earth elements for the US Government since 1981. James is a member of the

Strategic Materials Advisory Council, which supports policies and strategies aiming toward a fairer international trade regime for critical minerals and technologies and a more reliable industrial and technology base for US national security.

The panelists are:

Steve Constantinides, Director of Technology at Arnold Magnetic Technologies Inc. (Arnold). At Arnold Mr. Constantinides has overseen the development and growth of bonded rare earth magnets, increasing sales, building the Magnetics Technology Center, and, among other things, leading the research & development and engineering activities. Arnold supplies magnets for the reprographic, aerospace & defense industries along with related components for electric motors and many others.

Jeff Green, Founder & President J.A. Green & Company. Jeff has over 16 years of experience in the Department of Defense and on Capitol Hill; Jeff has the expertise to understand the complex world of government relations and the relationships to put clients in a position of strategic advantage. Jeff most recently served as Staff Director to the House Armed Services Subcommittee on Readiness.

Byron King, Editor, Outstanding Investments, Energy & Scarcity Investor Agora Financial. Byron is a Harvard-trained geologist and former aide to the United States Chief of Naval Operations, Byron is Agora Financial's resident oil and energy expert and editor and he draws on vast expertise and connections in global resource industries to bring the very best opportunities in energy, mining and precious metals.

James McKenzie, B. Comm. Finance, President, CEO & Director Ucore Rare Metals Inc. (TSXV: UCU | OTCQX: UURAF) is an entrepreneur with over 25 years experience managing, owning and operating companies within the Canadian private and public

equity sectors. James is ideally suited to discuss matters related to materials self sustainability as Ucore has been contracted by the DoD to perform a mineralogical and metallurgical evaluation of the Company's Bokan Mountain heavy REE (HREE) mine in southeastern Alaska to determine this property's ability to meet DOD requirements in the long term.

REE and Defense & Aerospace Applications

From the defense technology standpoint alone, rare earths have been essential to the advancement of aerospace technology. Rare earths are used in stealth radar evading technology, in targeting mechanisms for missiles and temperature resistant magnets and materials used in jet engines and aerofoil components in manned aircraft and increasingly in unmanned drone aircraft, which are playing an ever more important role in special operations. Missiles use samarium-cobalt (Sm-Co) magnets as do the ion plasma propulsion engines of future spacecraft. This is hardly science fiction and deep space exploration needs rare earth magnets, which are used in ion engines.

Samarium cobalt (SmCo) magnets were first tested in October 1998 in NASA's Deep Space 1. In the post World War II period, solid fuel rocketry was seen as the main tool to explore outer space. Today, as the distances that can be reached start to match our technological capability, rockets are no longer sufficient. NASA's 'Curiosity' rover, which successfully landed on Mars, recaptured the collective imagination in space exploration and will likely be the first of many more similar space travel missions propelled by rare earths based technologies.

Neodymium-iron-boron magnets are able to withstand extremely high temperatures and are used in special munitions. Cerium and other rare earth elements are used to produce phosphors in lighting, radars and night vision equipment; even the 'humble' smart-phone can become an invaluable piece of defense

equipment, facilitating communication. While not a rare metal in the chemical sense, rhenium is a highly temperature resistant element that is needed to produce the Joint Strike Fighter (JSF) aircraft to be supplied to the US and many of its NATO partners.