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China

China is coming under increasing pressure to let the yuan rise against the dollar. The weakening dollar has the effect of increasing the yuan against other currencies. We expect China to very, very slowing let the yuan rise. It is too risky and disruptive to let it rise quickly.

China is now the largest producer of all types of castings of any country in the world. Producing in excess of 35 million metric tons per year in 2009 it is nearly five times the second place U.S. production of a depressed 7.4 million metric tons per year and about 44% of the world production of 80 million tons per year. With over 30,000 foundries in China in 2008, the average production per foundry is 814 tons per year compared to 5,943 tons per foundry of the 2,017 foundries in the U.S. While the implication that the typical foundry in China is very small and labor intensive, some of the most modern and labor efficient foundries have been built in China in the recent years. The average tons per foundry have been dropping.

Imports of iron castings have value of $340 million in 2008, dropped to $214 million in 2009 and rose to $220 million in 2010, an increase of 2.5% from 2009 to 2010. This is about 3% of the $8.1 billion iron casting market in the United States. We do not have readily available statistics on other metals.

We believe the value of castings imported is understated. The Chinese have been aggressively adding value by machining and complete assembly. When the casting is included in an assembly, the value transfers from the casting to the product category of the assembly (i.e., pump, valve, etc.).

Casting quality is a major issue but savvy buyers have discovered that problems can be avoided by having an employee in China pre-inspect the castings. The shift of work to China has slowed primarily due to increased prices and we are increasingly hearing of work coming back. Foundries report buyers seeking prices on work that is currently in China. The development of state-of-the-art foundries was necessary to provide consistent, high quality castings. Castings from a highly automated Chinese foundry are 15% more expensive than a hand foundry but are necessary for applications requiring repeatability and quality.

Oddly enough, U.S. castings appear to be moving out of China but not necessarily back to the U.S. One company with die casting facilities in India reported they are acquiring work from China that is destined for the U.S. In iron castings, imports from China in 2010 rose 2.6% ($5.5 million) and from India they rose 30% ($19.8 million). Iron castings in the U.S. in 2010 grew 4.6% ($358 million). A strong increase in castings from Mexico ($25.6 million increase in 2010) signals that castings for the U.S. may be moving from China to Mexico as well.

Deliveries can be a problem. One foundry told us of a customer dual sourcing their iron castings after shipments scheduled to arrive in April finally landed in November.

China is under constantly increasing pressure to let the yuan rise. Look for this to happen slowly – very slowly. China stabilized the yuan when the global downturn occurred to protect Chinese companies. In June, 2010 it “pegged” it to a basket of currencies. Since then, it has risen 3.9% against the dollar. Now that the economy has started turning up, expect them to allow it to inch upward. The lesson learned when the Japanese allowed the rapid devaluation of the yen is making the Chinese very cautious. Export subsidies have been returned at lower levels in response to complaints from Chinese manufacturers. Labor rates have increased in the coastal manufacturing areas as labor has been more fully employed. Transportation rates spiked when oil reached $140 per barrel, adding substantially to transportation costs but have since moderated. Since China imports scrap, raw material costs are higher while energy costs are comparable. Our forecast is that the trend of importing from China will moderate and work will continue to shift back to the U.S.

Foundries have been reporting recent price increases from Chinese foundries bringing the landed price to within 10% of U.S. prices. When the spread is down to that level, convincing customers to buy American becomes relatively easy. If the yuan continues to move, look for the trend to increase.

China is now the second largest economy in the world, surpassing Japan in 2010. We look for it to be the largest economy in the world before too long. They have the resources and people to make it happen.

Yuan exchange rate – last 120 days ending February 18, 2011

On January 1, 2008 the exchange rate was 7.28 yuan to the dollar. On February 7, 2011 it was 6.57, a drop of 11%.

Other Asian (Japan, Korea, Thailand and Taiwan)
Imports from this market dropped significantly in 2009 and rebounded to some extent in 2010. The leading source of castings from this area is Japan. Many of those castings are automotive components for the Japanese transplant automobile manufacturers. Iron casting imports were $128 million in 2008 dropping to $77 million in 2009 and rising to $86 million in 2010. Nearly two thirds of those castings were from Japan.

India

India saw major drops in casting production due to its heavy export orientation. However, internal growth of the automotive industry has driven some recent upturns in production levels. When the economies in North America and Europe return, India may not be in as good a position to supply castings as they were previously. The country suffers from infrastructure issues related to raw materials and energy supplies.

India is the new China….sort of. Production costs in India from the U.S. viewpoint are now lower than China although transportation is slightly higher but the net result is that landed cost is lower. Iron casting imports to the U.S. from India rose 30% from 2009 to 2010 or a $19.8 million increase. India has seen major increases in internal demand competing for capacity. The country has an automobile building mandate designed to produce vehicles not only for India but also for export. The India Foundrymen Association estimates that India needs to double its casting capacity in the next five years to meet projected demand. The Indian foundries are hampered by cumbersome regulations and very high energy costs. Also, with lower availability of raw materials than other major countries, there are extra costs incurred in acquiring raw materials. We see India being more of a problem for U.S. foundries than Chinese foundries.

In total weight, India is now tied with the United States as the second largest producer of castings. However, we don't see any merit in adding total tonnage as a measure of size. Their tonnage is dominated by gray iron, the lowest cost metal. In dollar value, they have a long way to go to catch up to the U.S.

Brazil

Brazilian exports are down significantly due not only to the economy but also due to the gain of the real against the dollar. Look for them to stay down until the exchange ratio changes.

Brazil is the fourth largest source of imported castings at about 400,000 tons per year. The vast majority are iron castings due to the abundance of iron ore in Brazil. Imports from Brazil to the U.S. have been dropping rapidly due to the drop in value of the real versus the U.S. dollar. Unless the currency exchange rate reverses itself, expect to see a continued drop in imports from Brazil. Iron casting imports from Brazil dropped 25% from 2009 to 2010 ($14.8 million). It may be that some of this work went to Mexico.

Mexico

Mexico has surged as an exporter of castings to the United States. Iron castings jumped by 63.6% in 2010 to $63.2 million, an increase of $24.6 million from 2009. Mexico is now the third largest supplier of castings to the U.S. after China and India. The biggest portions of these are engine blocks and automotive castings from larger foundries. Smaller foundries do export to the U.S. but operating a foundry in Mexico is not easy. Graft is rampant. Unions are mandated by the government for all companies as well as mandating heavy social costs. Casting volumes from Mexico look to increase as costs in China and India increase. We are starting to see a backlash against smaller Mexican suppliers due to quality and reliability issues.

Canada

Casting imports from Canada were up in 2010. Iron casting imports increased 16.5% to $54.7 million in 2010. However, this is well below their 2008 level of $121 million. However, with the Canadian dollar now at parity with the U.S. dollar and operating costs comparable, Canada has ceased to have any real advantage over U.S. foundries. Competition from Canadian foundries is comparable to competition from other U.S. foundries.

Europe

About 350,000 tons of castings are imported from Europe each year. Many of these castings are for European transplant auto manufacturers. Imports have been dropping primarily due to the dollar weakening against the euro. Recently, however, the trend has reversed and the euro has dropped 15% to 20% against the dollar. Europe experienced many of the difficulties facing U.S. foundries a long time ago – high labor costs, high labor burdens and high tax rates. They responded by improving productivity effectively minimizing the impact of labor and trending to larger, more efficient foundries with superior quality. Europe is the go-to place for very high quality castings. The smarter U.S. foundries compete very effectively with European foundries and will continue to shift work to the U.S.

Summary

More productive foundries are telling us they can compete on casting price with any country in the world (landed cost and value). However, they also tell us that when they are required to provide a machined casting, they have a difficult time. At 10 man-hours per ton and a fully burdened labor cost of $30 per hour, a five pound casting has $.75 of labor – that's a little under 20 seconds labor. Productivity is typically lower in other countries (except Germany). Machining, even operating multiple machines, usually adds a lot more than 20 seconds making more difficult to be competitive with low labor cost countries.

We're bullish on the American metal casting industry, provided they continue getting smarter. That means improving productivity, reducing scrap, improving quality and continuing the value added trend. Over 100 metal casters closed during the recession, including some significant producers. For those who have survived 2010, the future is looking much better. The pie is growing again and there are fewer left to share in it.

The dollar has started to gain some strength against the euro. This does not bode well for exports to Europe. We like to see it weak.

Manufacturing companies are managing inventories better than ever. This will put greater pressure on metal casters to respond more quickly with shorter lead times. The smart metal casters will learn to operate "lean" and seek to provide more value added services. There is a real benefit for metal casters in better managed inventory – when a customer reduces production, the metal caster will be impacted only by the drop in production not accompanying inventory adjustments.

Look for OEM's to rethink their manufacturing as sales rebuild. It is much easier to manage a downturn in sales – and respond to an upturn – if manufacturing is out sourced. Metal casters who add value through machining and assembly are in a better position to benefit.

Watch though. Historically, when OEM's have been faced with significant supply problems they have responded by securing captive sources – either through acquisitions or green field foundries.