

Turbulent Times in the Stainless Steel Market

Prices and availability of stainless steel have been fluctuating for several months and continue to do so for a variety of reasons. The purchase and consumption by China of raw materials used for making stainless steels have increased dramatically, the current devaluation of the US dollar, deficits in the supply of nickel and the closing of a large US plant for the production of stainless steel plate, are all factors that have contributed to the volatility. This uncertainty in the market has required suppliers to increase the surcharges applied to price quotations and has lengthened lead times to obtain both commodity and specialty stainless steel materials. As a consequence, companies in the manufacturing sector, such as A&B Process Systems, are finding it difficult to provide bids and/or quotations to potential customers for any great length of time.

The Volatile Stainless Steel Market.

The manufacturing industries in North America are presently facing widespread increases in the prices of all stainless steel materials. The volatility of the market has negatively influenced business practices. Today, stainless steel suppliers will generally guarantee a price for only five days and in some cases, for even shorter times. The surcharges being applied have increased markedly for both 304 and 316 stainless steels. For example, from mid - 2003 when surcharges were \$0.16 for 304 and \$0.24 for 316 stainless steel materials, there has been a steady escalation, reaching \$0.57 and \$1.13 for 304 and 316 respectively in February 2005. Over the same period lead times have been extended to 10 - 12 weeks for commodity materials and 12 - 16 weeks for specialty steels.

What has Contributed to the Market Volatility?

There are several factors that have contributed to the present situation in the market for stainless steel;

- The demand has increased substantially in the United States, Europe, China and Korea.
- China and several other countries have limited the export of raw materials used in the production of steel, e.g., iron ore, coke (coke is a form of amorphous carbon, obtained by the controlled heating of coal, used to chemically reduce iron ore in a blast furnace. Pig iron, the product of the blast furnace, is then oxidized to steel using oxygen to react with the impurities).
- The cost of other raw materials has also escalated over the last 12 - 18 months, in particular, the cost of nickel metal. The average annual price of nickel metal has increased from \$2.70 per pound in 2001 to \$7.27 per pound in the first quarter of 2005.
- A significant economic event in 2003 was the rapid decline of the US dollar against the euro. The dollar continued to fall through 2004, approaching record lows against the Swiss franc and the Japanese yen, as well as the euro.
- At the end of 2001 Allegheny Ludlum closed a major stainless steel facility in Houston, Pennsylvania, eliminating approximately 250,000 tons of melt capacity.

Some twelve months later, Allegheny Technologies, one of the largest and most diversified producers of specialty steel in the world, closed its' plant in Massillon, Ohio, used for the production of stainless steel plate.

- The steel industries in the United States also face higher manufacturing costs, due in part to higher energy and transportation costs as well as the rising cost of healthcare for employees.

The China Effect.

The effect of the increased demand from China for raw materials to produce steel cannot be overstated. In early December 2003, it was announced that China had become the first nation to produce >200 million tons of raw steel in a year. This represents a growth of approximately 66% since the year 2000 and makes China now the world's largest producer of steel.

China is presently importing large quantities of scrap iron, depleting the global resources and consequently driving up the price, which has increased three-fold in six months. Moreover, the rapid economic growth within China has resulted in a large increase in the consumption of steel internally, further straining the global raw materials market.

China has traditionally been a source of low-priced coke, producing approximately one half of the world's supply of metallurgical coke. In 2003 China sold 14.75 million tons of coke overseas, but in 2004 the Chinese government limited export licenses, so that less than 10 million tons were exported. Consequently, the price of this raw material has rapidly escalated and it is expected that the pressure on coke prices will be maintained for the foreseeable future.

Why is the Nickel Market Important?

Austenitic steels contain chromium (18%) and nickel (8%) and examples of this type of stainless steel are the 300 series that are used extensively in the manufacture of equipment for the processing industries, e.g., the chemical, pharmaceutical, biotechnology, dairy, food and beverage industries. Although present in low amounts in these stainless steels, history has shown that the price of nickel largely determines the price of the steel, contributing some 60% to the cost of manufacture. Conversely, the health of the worldwide nickel market is heavily dependent upon the production of stainless steel, since 66% of all nickel mined and produced is made into steel.

The Outlook for the Nickel Market in 2005.

The first quarter of the year has seen little evidence of increased supply and/or a decline in the price of nickel. Yet the current shortage in the supply of nickel is expected to end in the second half of the year. However, two events that will occur in May are likely to affect supply negatively;



- the largest producer of nickel (Norilsk, Russia) typically cannot ship metal due to flooding of the Yenisei river.
- International Nickel (Inco) has announced that it will close the Copper Cliff smelter to complete repairs.

Further setbacks in nickel production could result from expiring union contracts at the Falconbridge Timmins mine and the same company faces negotiations with unions at its' Raglan mine. Inco is also to begin negotiations with the unions at the facilities in Thompson, Manitoba. It should be recalled that early in 2004 labor disputes forced the closure of the mines and smelters at Sudbury, Ontario, facilities that produced 5% of the world supply of nickel.

In short then, there remains some uncertainty in the production of nickel and prices of the metal ---- and consequently the prices and availability of stainless steel materials ---- will continue to reflect that uncertainty.

What Does This Mean for A&B's Customers?

A&B Process Systems are nationally recognized for the design, fabrication and installation of stainless steel equipment for use in the processing industries. Although the company does use other metals and alloys, the bulk of their work is with the stainless steels. Therefore, the price and availability of these materials are critically important to A&B's business. Presently the steel suppliers apply surcharges to every purchase and when A&B quote projects for customers, the fabrication costs are based upon the current surcharge rates. Unfortunately, due to the present volatility surrounding the surcharges on stainless steel materials, A&B believes that it must reserve the right to review the pricing in all quotations. Similarly, the availability of stainless steel materials is uncertain, with long lead times as indicated above. Therefore A&B Process Systems also feels that it is important to review the delivery schedules prior to the manufacture of an order. An awareness of the frequent changes in the stainless steel market allows A&B Process Systems to ensure a fair price and timely completion of a project.