

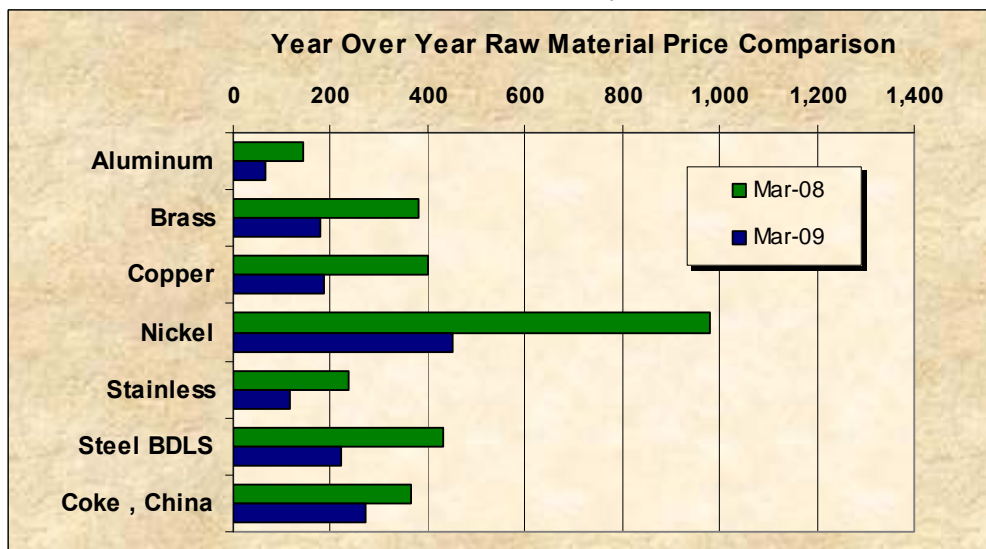


# Material Impacts On The Precision Machining Industry

April 2009

## Low Materials Prices Indicate Low Manufacturing Outlook

### Executive Summary



**Quick Summary:** The prices of the raw materials that we track are lower, from our last report in January 2009, excepting copper, brass, and coke. Year over year, all prices are down significantly.

**Price swing (Δ) from January 2009 to March 2009:**

**Aluminum:** Down 11.1% price variation (Δ)

**Copper,** Up 17.65% same time frame.

**Nickel:** Unchanged same period .

**Steel,** Down 13.73% in the same 2 month period.

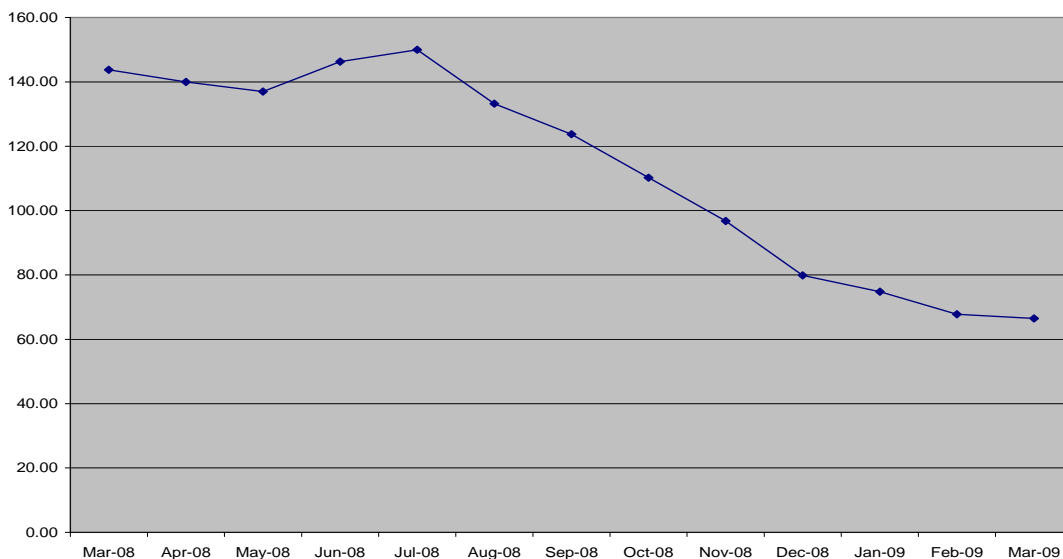
**China Coke,** Up 5.78%.

*These materials should be leading indicators of a recovery in manufacturing, since inventories are low and you can't make products without materials. These low prices (except for copper) do not seem to foreshadow increased demand for the short term.*

*PMMPA's just published 2009 Business Forecast Report made it very clear that our business is driven by the forces revealed in just a couple of indicators: Housing Starts, Total Vehicles Assembled, and led by the price of scrap. And that our markets have changed.*

## Aluminum *(cents per pound Comex Spot close)*

**Aluminum 2007 (Comex spot close)**



*Aluminum in March 2009 is selling for just 47% of the 2Q 2008 price of \$141.10.*

| Aluminum       | Feb-09       | Mar-09       |
|----------------|--------------|--------------|
| <b>Minimum</b> | <b>59.00</b> | <b>59.50</b> |
| <b>Maximum</b> | <b>67.75</b> | <b>66.50</b> |
| <b>\$ Δ</b>    | <b>8.75</b>  | <b>7.00</b>  |
| <b>% Δ</b>     | <b>14.8%</b> | <b>11.8%</b> |

Aluminum shipments from U.S. metals service centers declined more than 45% from those of the same month in 2008, while Canadian shipments of the light metal were down 26.8%.

Aluminum product shipments from U.S. metals service centers totaled 83,200 tons in February, down 45.9% from a year ago. Shipments for the first two months of the year of 174,200 tons of aluminum are off 44.6% from last year. Aluminum inventories at the end of February totaled 347,900 tons, a decline of 24.2% from the 2008 period and equal to a 4.2-month supply at current shipping rates.

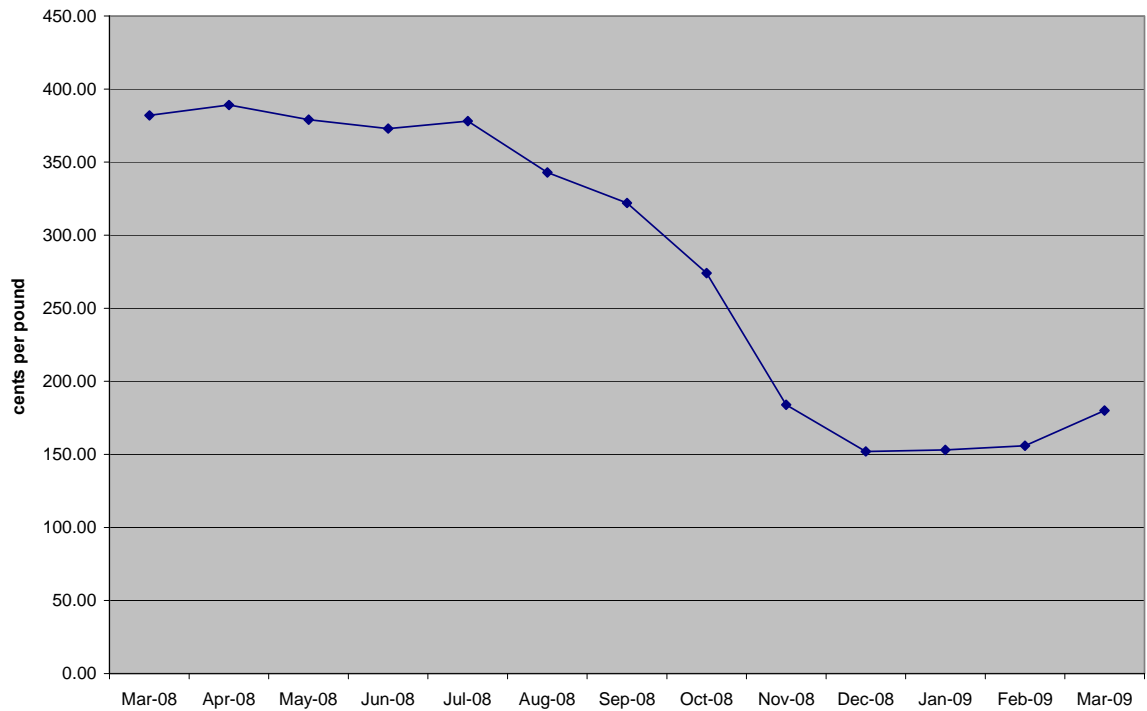
Canadian aluminum shipments of 10,600 tons were down 26.8% from volume in February 2008. The two-month volume total of 21,800 tons of aluminum is 24.4% lower than last year's shipments. Inventories at the end of February totaled 32,800 tons of aluminum, down 20.8% from a year ago and, at current shipping rates, equal to a 3.1-month supply.

Source: <http://www.ssci.org/news/details.aspx?ArticleID=137>

**Average price in 2008: \$1.27 per pound**

**Brass** (*cents per pound copper brass mill number 1*)

**Brass (copper brass mill #1 scrap)**



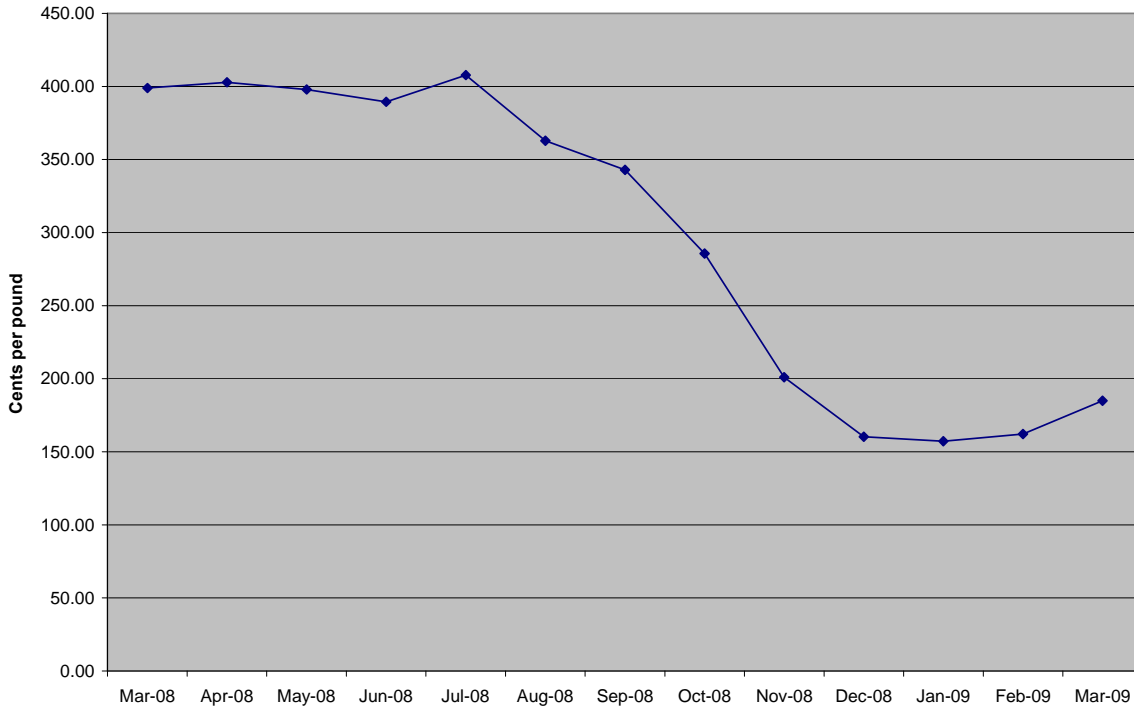
*Brass is up 17.6% in the 1Q 2009. March price is roughly 50% of its 2008 average.*

| <b>Brass</b>   | <b>Feb-09</b> | <b>Mar-09</b> |
|----------------|---------------|---------------|
| <b>Minimum</b> | <b>137.00</b> | <b>147.00</b> |
| <b>Maximum</b> | <b>156.00</b> | <b>180.00</b> |
| <b>\$ Δ</b>    | <b>19.00</b>  | <b>33.00</b>  |
| <b>% Δ</b>     | <b>13.9%</b>  | <b>22.4%</b>  |

**Average Price in 2008** (*cents per pound*): **322.50**

**Copper** cents (per pound Comex high grade cathode, spot close price)

**Copper (comex High grade cathode spot close)**



*Surcharge remains Zero. The Freight Fuel surcharge remains the 18% over the standard freight rate announced for February 19<sup>th</sup>, 2009.*

Copper moves in close correlation to the overall economy- it is said that “the red metal has a Ph.D. in Economics.”

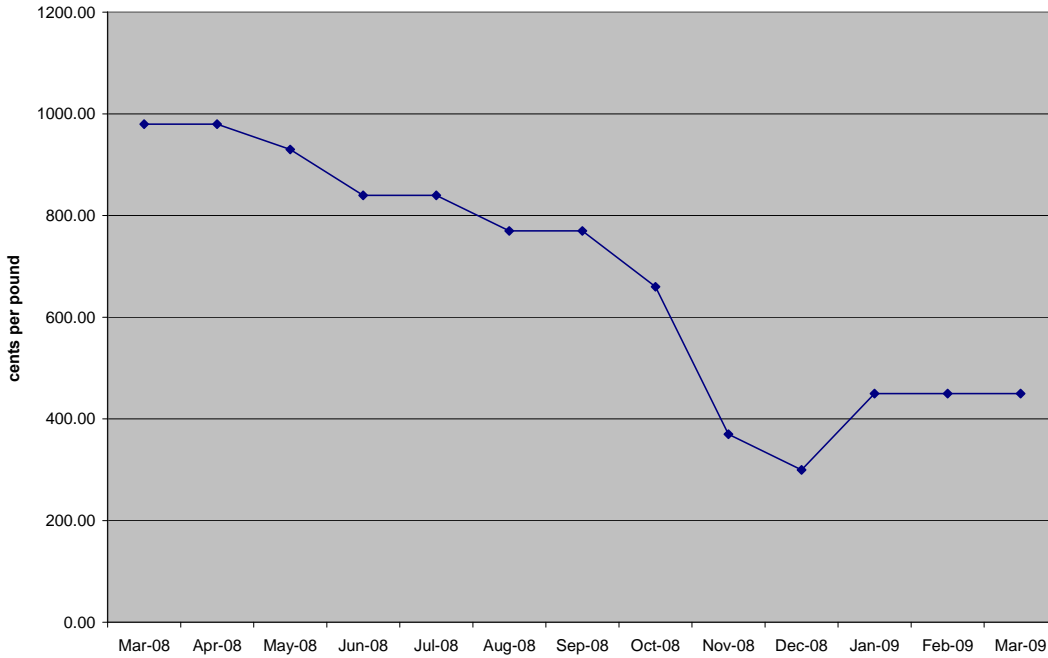
The graph above *suggests* things might be starting to improve.

| Copper         | Feb-09        | Mar-09        |
|----------------|---------------|---------------|
| <b>Minimum</b> | <b>141.40</b> | <b>150.75</b> |
| <b>Maximum</b> | <b>162.25</b> | <b>184.95</b> |
| <b>\$ Δ</b>    | <b>20.85</b>  | <b>34.20</b>  |
| <b>% Δ</b>     | <b>14.7%</b>  | <b>22.7%</b>  |

**Average price in 2008 (cents per pound): 338.99 per pound.**

**Nickel** *(cents per pound, New Clips and Solids Chicago)*

**Nickel scrap (new clips and solids)**



*Nickel in December is down 42% from last year's average, despite its price jumping 50% on January 29<sup>th</sup> to \$450.*

*Nickel metal is available in physical inventories at the present time due to low demand.*

| Nickel         | Feb-09        | Mar-09        |
|----------------|---------------|---------------|
| <b>Minimum</b> | <b>440.00</b> | <b>360.00</b> |
| <b>Maximum</b> | <b>450.00</b> | <b>370.00</b> |
| <b>\$ Δ</b>    | <b>10</b>     | <b>10</b>     |
| <b>% Δ</b>     | <b>2.3%</b>   | <b>2.8%</b>   |

**Average price in 2008: \$7.83per pound.**

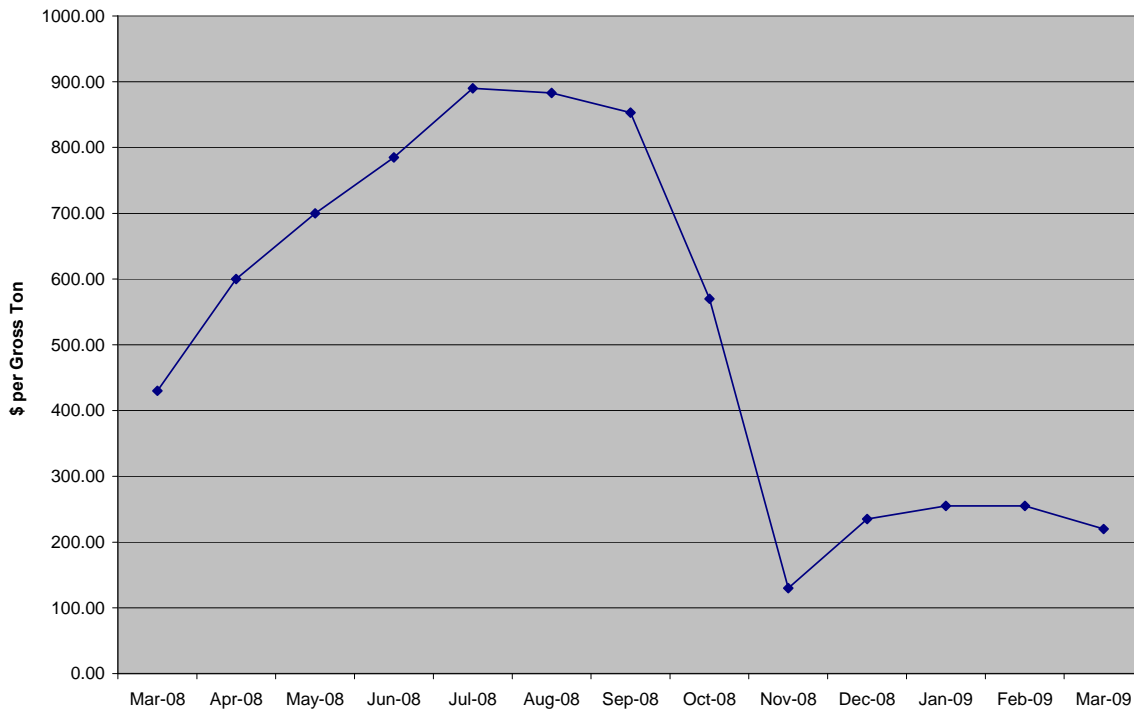
*(Nickel is a key component of many steel alloy systems, stainless steels, superalloys, and many other nickel base materials.)*

**Stainless**

Stainless Surcharges: Smolz+ Bickenbach USA *Stainless 303 per pound Raw Materials Surcharge-* April 2009: \$0.32 last posted on website. These are calculated on a two month lag.

**Steel** (dollars per gross ton, Number 1 Busheling composite, Chicago, Cleveland, and Pittsburgh)

**Steel Scrap (#1 Busheling)**



Surcharges: April 2009 Surcharges for Cold Finished Bars (per CWT) Scrap:\$ 1.50; Manganese: \$.09; Alloy: 41XX= \$17.6; 43XX= \$4.33; 86XX=\$2.29

**Steel scrap commodity that we track is highly volatile- down 78% in March compared to its July 2008 high of \$890.**

| Steel Busheling | Feb-09 | Mar-09 |
|-----------------|--------|--------|
| Minimum         | 218.33 | 193.33 |
| Maximum         | 254.67 | 218.33 |
| \$ Δ            | 36.34  | 25     |
| % Δ             | 16.6%  | 12.9%  |

For the second month in a row, steel shipments from metals service centers in the United States and Canada fell by more than 40% from year-ago levels during February, the Metals Activity Report from the Metals Service Center Institute shows.

February shipments of steel products from U.S. service centers totaled 2.4 million tons, down 43.3% from February 2008 volume. For the year to date, steel shipments of 5.0 million tons were down 43% from the same period last year. At current shipping rates, month-end

inventories of 8.3 million tons, down 16.3% lower than a year ago, equaled a 3.4-month supply.

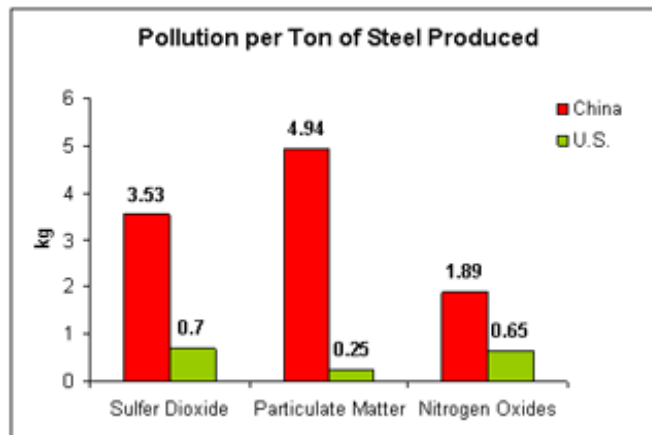
In Canada, metals service centers shipped 385,100 tons of steel, a decline of 42.1% from a year ago. Shipments for the first two months of the year of 792,000 tons are down 40.2% from last year. Month-end steel inventories were about 1.2 million tons in Canada, down 29.8% from February 2008 and equal to a 3.1-month supply at current shipping rates.

Source: <http://www.ssci.org/news/details.aspx?ArticleID=137>

**Commentary:**

***Please take published “months of supply” inventory numbers with a grain of salt! They are calculated on current rates of shipment. Using, say the rate of shipments for February 2007 (before the 2008 malaise) of 4.7 million tons shipped, that 8.3 million tons of steel inventory at month end is actually about a 7 week supply not 3.4 months... And of course, who knows what items may not be covered?(If auto build rates improve, demand for automotive materials would be more reflective of prior years’ rates...)***

**Average price in 2008: \$575.50 per gross ton**

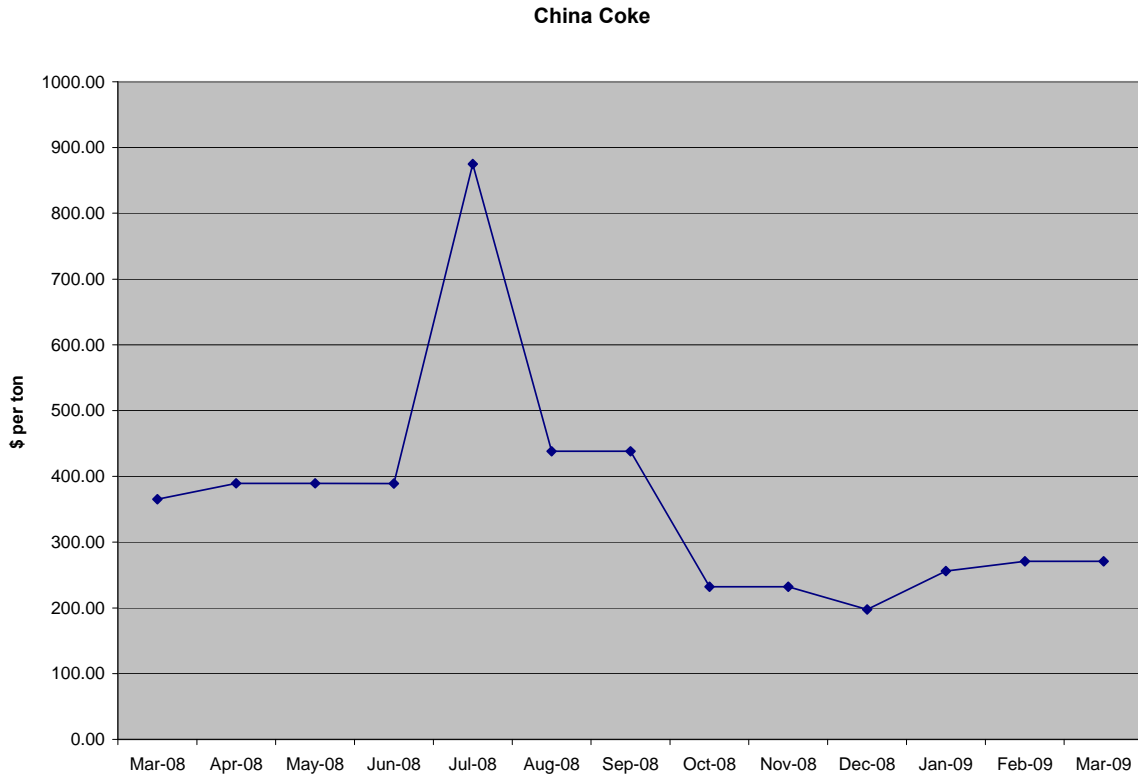


**Source:** National Bureau of Statistics, "China Environmental Statistics Yearbook," 2006 (China); 2002 National Emissions Inventory Data and Documentation," September 2007 (U.S.)

"The fact that China is now responsible for at least 50 percent of total global steelmaking CO<sub>2</sub> emissions generated and levels of pollution nearly 20 times higher per ton of steel in overall emissions of particulate matter than in the U.S, makes it obvious that any CO<sub>2</sub> regulatory scheme in the U.S. involving the American steel industry that does not provide for similar measures to be taken by other major steel-producing nations such as China on a contemporary time line, will distort or adversely impact the competitiveness of U.S. steelmakers in comparison to global steelmakers."- Thomas J. Gibson, president and CEO, AISI

**Read More:** <http://www.americanmanufacturing.org/wordpress/wp-content/uploads/2009/03/chinaenvironmental-report-march-2009.pdf>

## China Coke (Chinese) (\$ per metric tonne)



| China Coke | Feb-09 | Mar-09 |
|------------|--------|--------|
| Minimum    | 270.80 | 270.80 |
| Maximum    | 270.80 | 270.80 |
| \$ Δ       | 0      | 0      |
| % Δ        | 0%     | 0%     |

*China coke is down \$111 from last year's average.*

**Average price in 2008: \$382.34 per tonne.**

(Coke is used in blast furnaces to make hot metal iron for use in the basic oxygen steelmaking process. China accounts for half of the world's supply of coke, one third of which went to the European Union.)

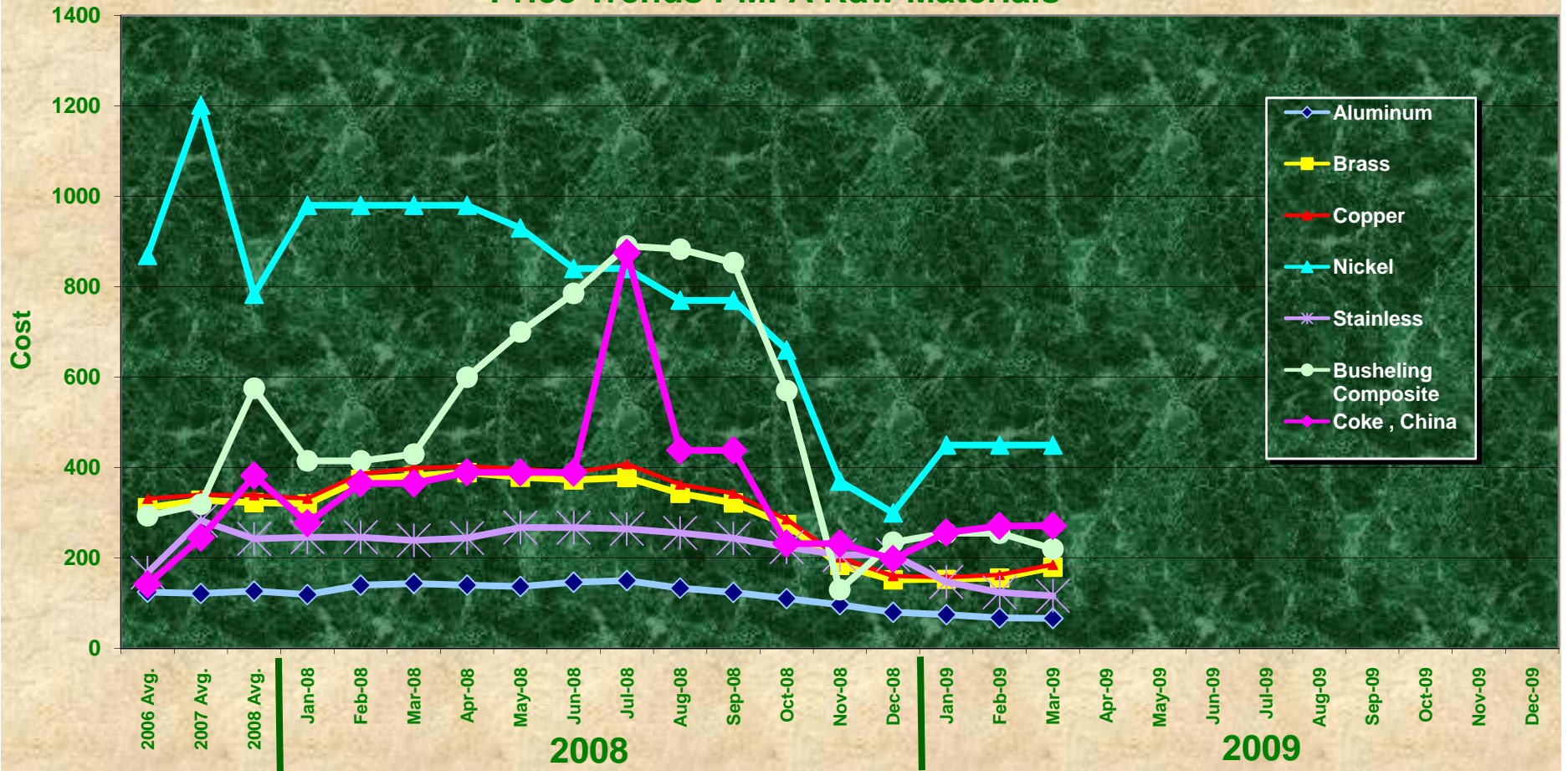
USSteel Clairton Coke Plant:

[http://metalproducing.com/news/news/84076/uss\\_halts\\_1billion\\_modernization\\_project](http://metalproducing.com/news/news/84076/uss_halts_1billion_modernization_project)

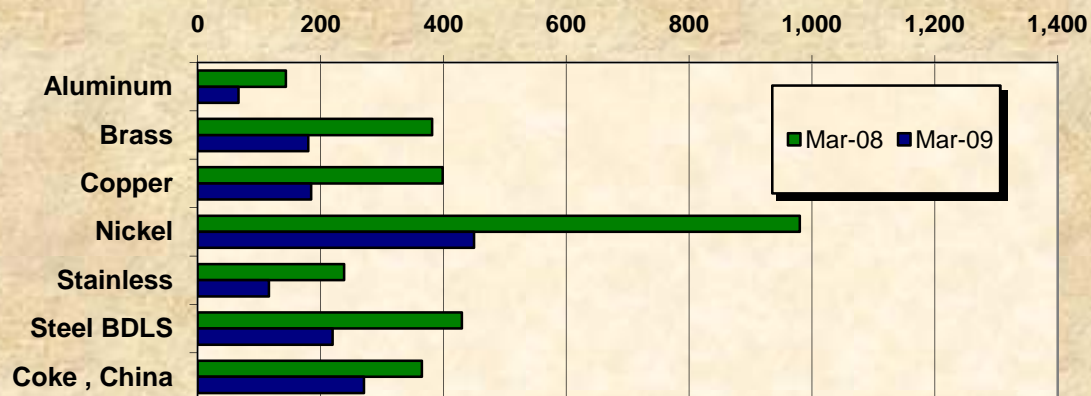
*-Miles Free*

Director, Industry Research and Technology  
Precision Machined Products Association

## Price Trends PMPA Raw Materials



### Year Over Year Raw Material Price Comparison



## PMPA Raw Materials Index

|                  | Aluminum      | Brass          | Copper         | Nickel         | Stainless     | Busheling Composite | Coke , China  |
|------------------|---------------|----------------|----------------|----------------|---------------|---------------------|---------------|
| <b>2006 Avg.</b> | 124.62        | 311.58         | 331.19         | 869.17         | 167.50        | 293.25              | 141.75        |
| <b>2007 Avg.</b> | 121.49        | 328.17         | 339.86         | 1201.67        | 282.65        | 319.17              | 244.75        |
| <b>2008 Avg.</b> | 126.64        | 322.50         | 338.99         | 783.33         | 242.43        | 575.50              | 382.34        |
| <b>Jan-08</b>    | 119.00        | 320.00         | 331.70         | 980.00         | 246.06        | 415.00              | 277.00        |
| <b>Feb-08</b>    | 139.75        | 374.00         | 386.35         | 980.00         | 246.06        | 415.00              | 365.30        |
| <b>Mar-08</b>    | 143.75        | 382.00         | 398.95         | 980.00         | 238.62        | 430.00              | 365.30        |
| <b>Apr-08</b>    | 140.00        | 389.00         | 402.80         | 980.00         | 244.09        | 600.00              | 389.40        |
| <b>May-08</b>    | 137.00        | 379.00         | 397.85         | 930.00         | 267.10        | 700.00              | 389.40        |
| <b>Jun-08</b>    | 146.30        | 373.00         | 389.55         | 840.00         | 267.10        | 785.00              | 389.00        |
| <b>Jul-08</b>    | 150.00        | 378.00         | 407.75         | 840.00         | 264.47        | 890.00              | 875.00        |
| <b>Aug-08</b>    | 133.25        | 343.00         | 362.85         | 770.00         | 255.35        | 883.00              | 438.07        |
| <b>Sep-08</b>    | 123.75        | 322.00         | 342.95         | 770.00         | 243.21        | 853.00              | 438.07        |
| <b>Oct-08</b>    | 110.25        | 274.00         | 285.70         | 660.00         | 223.94        | 570.00              | 232.00        |
| <b>Nov-08</b>    | 96.75         | 184.00         | 201.10         | 370.00         | 206.58        | 130.00              | 232.00        |
| <b>Dec-08</b>    | 79.85         | 152.00         | 160.35         | 300.00         | 206.58        | 235.00              | 197.50        |
| <b>Jan-09</b>    | 74.80         | 153.00         | 157.20         | 450.00         | 147.00        | 255.00              | 256.00        |
| <b>Feb-09</b>    | 67.75         | 156.00         | 162.25         | 450.00         | 124.00        | 255.00              | 270.80        |
| <b>Mar-09</b>    | 66.50         | 180.00         | 184.95         | 450.00         | 116.00        | 220.00              | 270.80        |
| <b>Apr-09</b>    |               |                |                |                |               |                     |               |
| <b>May-09</b>    |               |                |                |                |               |                     |               |
| <b>Jun-09</b>    |               |                |                |                |               |                     |               |
| <b>Jul-09</b>    |               |                |                |                |               |                     |               |
| <b>Aug-09</b>    |               |                |                |                |               |                     |               |
| <b>Sep-09</b>    |               |                |                |                |               |                     |               |
| <b>Oct-09</b>    |               |                |                |                |               |                     |               |
| <b>Nov-09</b>    |               |                |                |                |               |                     |               |
| <b>Dec-09</b>    |               |                |                |                |               |                     |               |
| Jan09- Jan 08    | <b>-44.20</b> | <b>-167.00</b> | <b>-174.50</b> | <b>-530.00</b> | <b>-99.06</b> | <b>-160.00</b>      | <b>-21.00</b> |
| \$Change         |               |                |                |                |               |                     |               |
| Jan09-Jan08      | <b>-37.14</b> | <b>-52.19</b>  | <b>-52.61</b>  | <b>-54.08</b>  | <b>-40.26</b> | <b>-38.55</b>       | <b>-7.58</b>  |
| %Change          |               |                |                |                |               |                     |               |
| Mar 09- Jan 09   | <b>-8.30</b>  | <b>27.00</b>   | <b>27.75</b>   | <b>0.00</b>    | <b>-31.00</b> | <b>-35.00</b>       | <b>14.80</b>  |
| \$Change         |               |                |                |                |               |                     |               |
| Mar 09-Jan09     | <b>-11.10</b> | <b>17.65</b>   | <b>17.65</b>   | <b>0.00</b>    | <b>-21.09</b> | <b>-13.73</b>       | <b>5.78</b>   |
| %Change          |               |                |                |                |               |                     |               |
| 2008 Average     | <b>126.64</b> | <b>322.50</b>  | <b>338.99</b>  | <b>783.33</b>  | <b>242.43</b> | <b>575.50</b>       | <b>382.34</b> |

## PMPA Raw Materials Index

Prices are as published, do not include surcharges.

**Aluminum** , Comex Spot close, cents/pound

**Brass Scrap**, Copper Brass mill #1, cents/pound

**Copper**, Comex High Grade Cathode, cents/pound

**Nickel**, Scrap clips and solids, cents per pound

**Stainless**, 303 CD bars, cents/pound

**Steel Busheling, #1**, AMM Composite, \$/gross Ton

**Coke**- anecdotal reports

### ***About the commodities selected for tracking:***

The items selected were chosen as indicators of costs for the materials commonly used by our industry.

They were selected because they were available and published, rather than a transaction price which might be confounded with other commercial objectives or geographic market peculiarities.

**Aluminum**- The use of the Comex Spot close price should need no explanation.

**Brass Scrap, Copper Brass mill, #1** was chosen as indicative of the general trend for high quality Brass Scrap for recycling.

**Copper, Comex High Grade Cathode** was chosen as indicative of costs for "new Copper" to be added to the existing Brass Metal inventory available.

**Nickel, Scrap clips and solids** was chosen as a proxy indicator for understanding Stainless Steel and High Temp alloys which typically are high % Nickel content. (303-8-10%; 316 10-12%; Hastelloy- Greater than 50%)

**Stainless**- 303 bars this number is published but we do not see it as realistic and provide it strictly for information.

**Steel- Busheling Composite**. This indicator was selected as it correlated to the #1 bundles we used prior, now obsolete. It is a factor in the determination of most mill surcharges.

**Coke**- Coke is used in blast furnace production of Iron in order to produce steel by the Basic Oxygen Process (BOP).

Blast furnaces use the coke to provide support for the burden (iron ore, limestone, bushellings, sinter etc.), sensible heat, and carbon monoxide reactant to reduce the oxide in the ore to pure iron. Coke itself is produced by blending a mixture of low- and high- volatility and ash coals and processing them at very high temperatures to distill out volatile organics leaving a strong porous cellular solid which is the critical ingredient for the Blast furnace- BOP producer.

This process is daunting from an environmental impact point of view. ***Without coke, there is no blast furnace iron;***

***Without blast furnace iron, there is no BOP steel.***

***Quarterly averages have been calculated and used for this report for years prior to 2005 in order to tidy up the presentation of data.***

Miles Free

**Quarterly Averages  
PMPA Material Impacts**

|                         | Aluminum | Brass  | Copper | Nickel | Stainless | Steel<br>BDLS | Coke ,<br>China |
|-------------------------|----------|--------|--------|--------|-----------|---------------|-----------------|
| <b>2003</b>             | 65.60    | 77.50  | 78.21  | 310.23 | 111.00    | 114.55        |                 |
|                         | 65.84    | 79.48  | 80.15  | 312.50 | 105.00    | 124.05        |                 |
|                         | 66.77    | 81.93  | 82.02  | 325.12 | 102.00    | 131.00        |                 |
| <b>3rd Qtr.</b>         | 66.07    | 79.64  | 80.13  | 315.95 | 106.00    | 123.20        |                 |
|                         | 69.79    | 87.04  | 88.20  | 359.67 | 102.00    | 132.00        |                 |
|                         | 70.67    | 92.22  | 92.76  | 419.72 | 105.33    | 145.33        |                 |
|                         | 73.52    | 98.76  | 99.67  | 452.50 | 106.00    | 162.43        |                 |
| <b>4th Qtr.</b>         | 71.33    | 92.67  | 93.54  | 410.63 | 104.44    | 146.59        |                 |
| <b>2004</b>             | 76.29    | 108.80 | 110.28 | 562.50 | 106.00    | 182.00        |                 |
|                         | 80.40    | 120.00 | 121.60 | 565.00 | 106.00    | 275.00        | 182.00          |
|                         | 84.65    | 137.00 | 139.70 | 525.00 | 121.50    | 295.00        | 460.00          |
| <b>1st Qtr.</b>         | 80.45    | 121.93 | 123.86 | 550.83 | 111.17    | 250.67        | 321.00          |
|                         | 88.65    | 136.00 | 137.10 | 500.00 | 121.50    | 270.00        | 450.00          |
|                         | 80.85    | 123.50 | 124.70 | 425.00 | 121.50    | 240.00        | 410.00          |
|                         | 83.45    | 128.00 | 129.25 | 500.00 | 121.50    | 250.00        | 325.00          |
| <b>2nd Qtr.</b>         | 84.32    | 129.17 | 130.35 | 475.00 | 121.50    | 253.33        | 395.00          |
|                         | 84.30    | 130.00 | 131.30 | 550.00 | 121.50    | 395.00        |                 |
|                         | 84.30    | 131.00 | 131.55 | 520.00 | 121.50    | 395.00        |                 |
|                         | 90.95    | 135.00 | 139.90 | 520.00 | 153.50    | 375.00        | 310.5           |
| <b>3rd Qtr.</b>         | 86.52    | 132.00 | 134.25 | 530.00 | 132.17    | 388.33        | 310.50          |
|                         | 91.30    | 142.00 | 147.35 | 600.00 | 157.00    | 415.00        | 239.00          |
|                         | 89.45    | 140.00 | 144.50 | 500.00 | 157.00    | 430.00        | 239.00          |
|                         | 94.25    | 145.00 | 149.10 | 500.00 | 157.00    | 430.00        | 280.00          |
| <b>4th Qtr.</b>         | 91.67    | 142.33 | 146.98 | 533.33 | 157.00    | 425.00        | 252.67          |
| <b>2005</b>             | 93.60    | 145.00 | 149.50 | 500.00 | 157.00    | 370.00        | 280.00          |
|                         | 95.05    | 144.00 | 150.25 | 550.00 | 157.00    | 315.00        | 230.00          |
|                         | 96.65    | 146.00 | 151.05 | 550.00 | 157.00    | 255.00        | 230.00          |
| <b>1st Qtr.</b>         | 95.10    | 145.00 | 150.27 | 533.33 | 157.00    | 313.33        | 246.67          |
|                         | 93.50    | 149.00 | 154.20 | 600.00 | 157.00    | 270.00        | 230.00          |
|                         | 85.50    | 144.00 | 161.40 | 650.00 | 160.00    | 215.00        | 230.00          |
|                         | 80.25    | 149.00 | 153.00 | 650.00 | 160.00    | 145.00        | 210.00          |
| <b>2nd Qtr.</b>         | 86.42    | 147.33 | 156.20 | 633.33 | 159.00    | 210.00        | 223.33          |
|                         | 84.40    | 153.00 | 163.00 | 560.00 | 160.00    | 170.00        | 210.00          |
|                         | 89.80    | 168.00 | 177.95 | 540.00 | 160.00    | 230.00        | 210.00          |
|                         | 89.00    | 173.00 | 187.65 | 540.00 | 160.00    | 285.00        | 210.00          |
| <b>3rd Qtr.</b>         | 87.73    | 164.67 | 176.20 | 546.67 | 160.00    | 228.33        | 210.00          |
|                         | 91.90    | 181.00 | 196.80 | 520.00 | 166.00    | 235.00        | 185.00          |
|                         | 101.55   | 193.00 | 218.00 | 480.00 | 166.00    | 285.00        | 130.00          |
|                         | 105.10   | 208.00 | 228.00 | 500.00 | 166.00    | 280.00        | 150.00          |
| <b>4th Qtr.</b>         | 99.52    | 194.00 | 214.27 | 500.00 | 166.00    | 266.67        | 155.00          |
| <b>2005<br/>Average</b> | 92.19    | 162.75 | 174.23 | 553.33 | 160.50    | 254.58        | 208.75          |

Table A Supplemental Calculations

**Quarterly Averages  
PMPA Material Impacts**

|                         | Aluminum | Brass  | Copper | Nickel  | Stainless | Steel<br>BDLS | Coke ,<br>China |
|-------------------------|----------|--------|--------|---------|-----------|---------------|-----------------|
| <b>2006</b>             | 115.50   | 221.00 | 229.65 | 550.00  | 166.00    | 280.00        | 120.00          |
|                         | 122.25   | 229.00 | 233.65 | 550.00  | 166.00    | 275.00        | 148.00          |
|                         | 116.50   | 245.00 | 250.35 | 550.00  | 135.00    | 294.00        | 148.00          |
| <b>1st Qtr.</b>         | 118.08   | 231.67 | 237.88 | 550.00  | 155.67    | 283.00        | 138.67          |
|                         | 130.60   | 320.00 | 348.30 | 700.00  | 135.00    | 294.00        | 138.00          |
|                         | 146.00   | 373.50 | 407.55 | 810.00  | 135.00    | 315.00        | 138.00          |
|                         | 120.00   | 345.00 | 369.10 | 810.00  | 135.00    | 342.00        | 140.00          |
| <b>2nd Qtr.</b>         | 132.20   | 346.17 | 374.98 | 773.33  | 135.00    | 317.00        | 138.67          |
|                         | 121.50   | 357.00 | 382.95 | 910.00  | 135.00    | 342.00        | 140.00          |
|                         | 116.60   | 351.00 | 366.50 | 1150.00 | 135.00    | 342.00        | 125.00          |
|                         | 122.25   | 348.00 | 372.20 | 1150.00 | 135.00    | 285.00        | 125.00          |
| <b>3rd Qtr.</b>         | 120.12   | 352.00 | 373.88 | 1070.00 | 135.00    | 323.00        | 130.00          |
|                         | 129.10   | 327.50 | 356.00 | 1050.00 | 245.00    | 275.00        | 164.50          |
|                         | 127.10   | 318.00 | 334.55 | 1050.00 | 245.00    | 245.00        | 164.50          |
|                         | 128.00   | 304.00 | 323.45 | 1150.00 | 243.00    | 230.00        | 150.00          |
| <b>4th Qtr.</b>         | 128.07   | 316.50 | 338.00 | 1083.33 | 244.33    | 250.00        | 159.67          |
| <b>2006<br/>Average</b> | 124.62   | 311.58 | 331.19 | 869.17  | 167.50    | 293.25        | 141.75          |
| <b>2007</b>             | 128.50   | 266.00 | 265.15 | 1250.00 | 243.00    | 260.00        | 185.00          |
|                         | 130.00   | 281.00 | 285.25 | 1250.00 | 253.00    | 295.00        | 185.00          |
|                         | 125.50   | 306.50 | 314.35 | 1350.00 | 265.00    | 365.00        | 190.00          |
| <b>1st Qtr.</b>         | 128.00   | 284.50 | 288.25 | 1283.33 | 253.67    | 306.67        | 186.67          |
|                         | 128.85   | 358.00 | 367.40 | 1350.00 | 287.00    | 365.00        | 185.00          |
|                         | 129.25   | 367.00 | 375.05 | 1350.00 | 335.00    | 335.00        | 190.00          |
|                         | 125.35   | 338.50 | 346.55 | 1350.00 | 335.00    | 295.00        | 245.00          |
| <b>2nd Qtr.</b>         | 127.82   | 354.50 | 363.00 | 1350.00 | 319.00    | 331.67        | 206.67          |
|                         | 122.65   | 353.00 | 375.40 | 1350.00 | 342.80    | 295.00        | 260.00          |
|                         | 117.30   | 339.00 | 359.50 | 1250.00 | 342.80    | 305.00        | 250.00          |
|                         | 110.00   | 347.00 | 363.60 | 980.00  | 262.63    | 330.00        | 250.00          |
| <b>3rd Qtr.</b>         | 116.65   | 346.33 | 366.17 | 1193.33 | 316.08    | 310.00        | 253.33          |
|                         | 113.25   | 359.00 | 374.95 | 980.00  | 235.04    | 330.00        | 360.00          |
|                         | 117.25   | 320.00 | 335.60 | 980.00  | 245.25    | 320.00        | 360.00          |
|                         | 110.00   | 303.00 | 315.50 | 980.00  | 245.25    | 335.00        | 277.00          |
| <b>4th Qtr.</b>         | 113.50   | 327.33 | 342.02 | 980.00  | 241.85    | 328.33        | 332.33          |
| <b>2007<br/>Average</b> | 121.49   | 328.17 | 339.86 | 1201.67 | 282.65    | 319.17        | 244.75          |

Table A Supplemental Calculations

**Quarterly Averages  
PMPA Material Impacts**

|                         | <b>Aluminum</b> | <b>Brass</b> | <b>Copper</b> | <b>Nickel</b> | <b>Stainless</b> | <b>Steel<br/>BDLS</b> | <b>Coke ,<br/>China</b> |
|-------------------------|-----------------|--------------|---------------|---------------|------------------|-----------------------|-------------------------|
| <b>2008</b>             | 119.00          | 320.00       | 331.70        | 980.00        | 246.06           | 415.00                | 277.00                  |
|                         | 139.75          | 374.00       | 386.35        | 980.00        | 246.06           | 415.00                | 365.30                  |
|                         | 143.75          | 382.00       | 398.95        | 980.00        | 238.62           | 430.00                | 365.30                  |
| <b>1st Qtr.</b>         | 134.17          | 358.67       | 372.33        | 980.00        | 243.58           | 420.00                | 335.87                  |
|                         | 140.00          | 389.00       | 402.80        | 980.00        | 244.09           | 600.00                | 389.40                  |
|                         | 137.00          | 379.00       | 397.85        | 930.00        | 267.10           | 700.00                | 389.40                  |
|                         | 146.30          | 373.00       | 389.55        | 840.00        | 267.10           | 785.00                | 389.00                  |
| <b>2nd Qtr.</b>         | 141.10          | 380.33       | 396.73        | 916.67        | 259.43           | 695.00                | 389.27                  |
|                         | 150.00          | 378.00       | 407.75        | 840.00        | 264.47           | 890.00                | 875.00                  |
|                         | 133.25          | 343.00       | 362.85        | 770.00        | 255.35           | 883.00                | 438.07                  |
|                         | 123.75          | 322.00       | 342.95        | 770.00        | 243.21           | 853.00                | 438.07                  |
| <b>3rd Qtr.</b>         | 135.67          | 347.67       | 371.18        | 793.33        | 254.34           | 875.33                | 583.71                  |
|                         | 110.25          | 274.00       | 285.70        | 660.00        | 223.94           | 570.00                | 232.00                  |
|                         | 96.75           | 184.00       | 201.10        | 370.00        | 206.58           | 130.00                | 232.00                  |
|                         | 79.85           | 152.00       | 160.35        | 300.00        | 206.58           | 235.00                | 197.50                  |
| <b>4th Qtr.</b>         | 95.62           | 203.33       | 215.72        | 443.33        | 212.37           | 311.67                | 220.50                  |
| <b>2008<br/>Average</b> | 126.64          | 322.50       | 338.99        | 783.33        | 242.43           | 575.50                | 382.34                  |
| <b>2009</b>             | 74.80           | 153.00       | 157.20        | 450.00        | 147.00           | 255.00                | 256.00                  |
|                         | 67.75           | 156.00       | 162.25        | 450.00        | 124.00           | 255.00                | 270.80                  |
|                         | 66.50           | 180.00       | 184.95        | 450.00        | 116.00           | 220.00                | 270.80                  |
| <b>1st Qtr.</b>         | 69.68           | 163.00       | 168.13        | 450.00        | 129.00           | 243.33                | 265.87                  |