

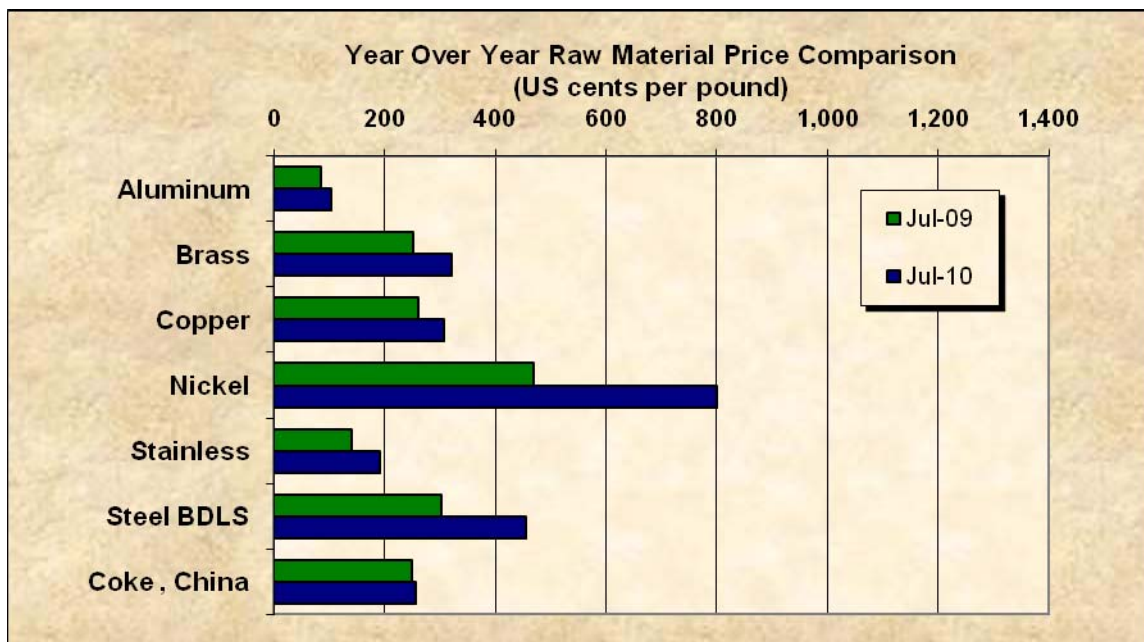


Material Impacts On The Precision Machining Industry

August 2010

Prices Rise As Manufacturing Recovers

Executive Summary



Quick Summary: *The prices of all raw materials that we track rose as follows over the past year:*

Aluminum: *Up 23% from July 2009.*

Brass: *Up 28% from July 2009.*

Copper: *Up 17% from July 2009.*

Nickel: *Up 70% from July 2009.*

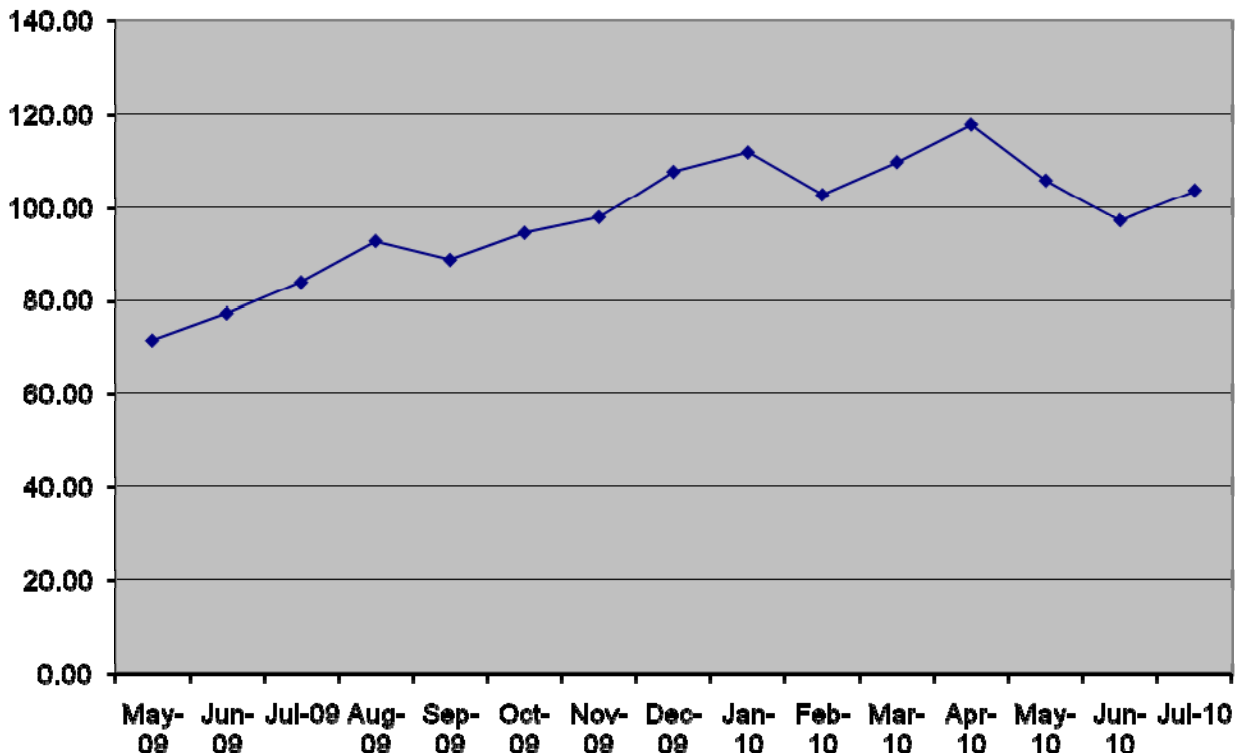
Stainless: *Up 37% from July 2009.*

Steel, Busheling: *Up 51% from July 2009.*

China Coke, *Up 3% from July 2009.*

They may not call it **inflation...YET**. But all of the crucial raw materials we track are up-**double and triple digit percentages**. In addition to the fundamentals in our local markets, there are global issues that add more risk and thus price variability to our industry's raw materials. The issue of knowing where to find material remains just as important as price in the current market.

Aluminum *(AMM Free Market cents per pound)*



Aluminum is down 7.21% from January, but up 23.44% since July 2009.

Shipments of aluminum products from U.S. metals service centers in July totaled 118,000 tons, or 31.6% more than in July 2009. June shipments were 37.7% above those of a year earlier. For the first seven months of the year, U.S. aluminum shipments totaled 733,800 tons, a rise of 19.5% above the year-ago period. Inventories at the end of July of 317,900 tons were 19.3% higher than a year ago and equal to a 2.7-month supply at current shipping rates. This compares with a 2.5-month supply at the end of June.

Canadian service center aluminum shipments of 9,900 tons in July were 1.3% above those of a year ago; monthly shipments were up 12.2% in June and 11.6% in May over the same month in 2009. For the year to date, shipments of 78,500 tons were 4.8% above those of the same 2009 period. Canadian aluminum inventories at the end of July totaled 32,000 tons, or 4.7% more than in the same month last year. At current shipping rates, that equals a 3.2-month supply, compared with a 2.4-month supply at the end of June.

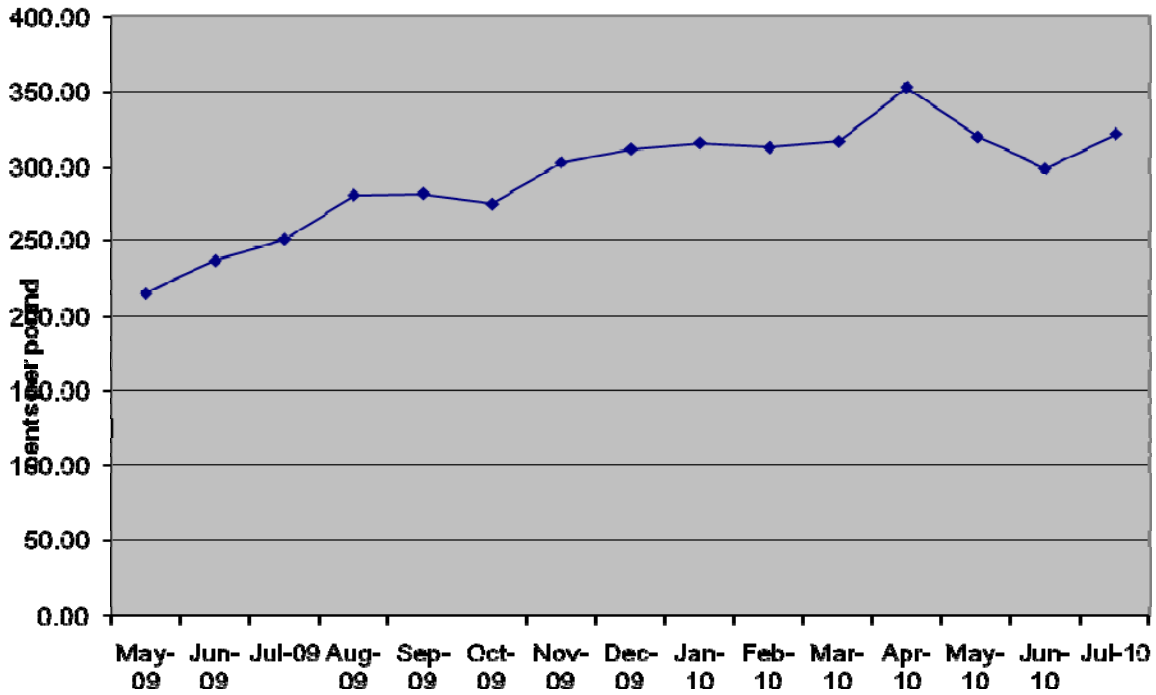
Source: <http://www.ssci.org/news/details.aspx?ArticleID=165>

Commentary: We believe that aluminum prices will move with energy prices, which we do not believe are declining.

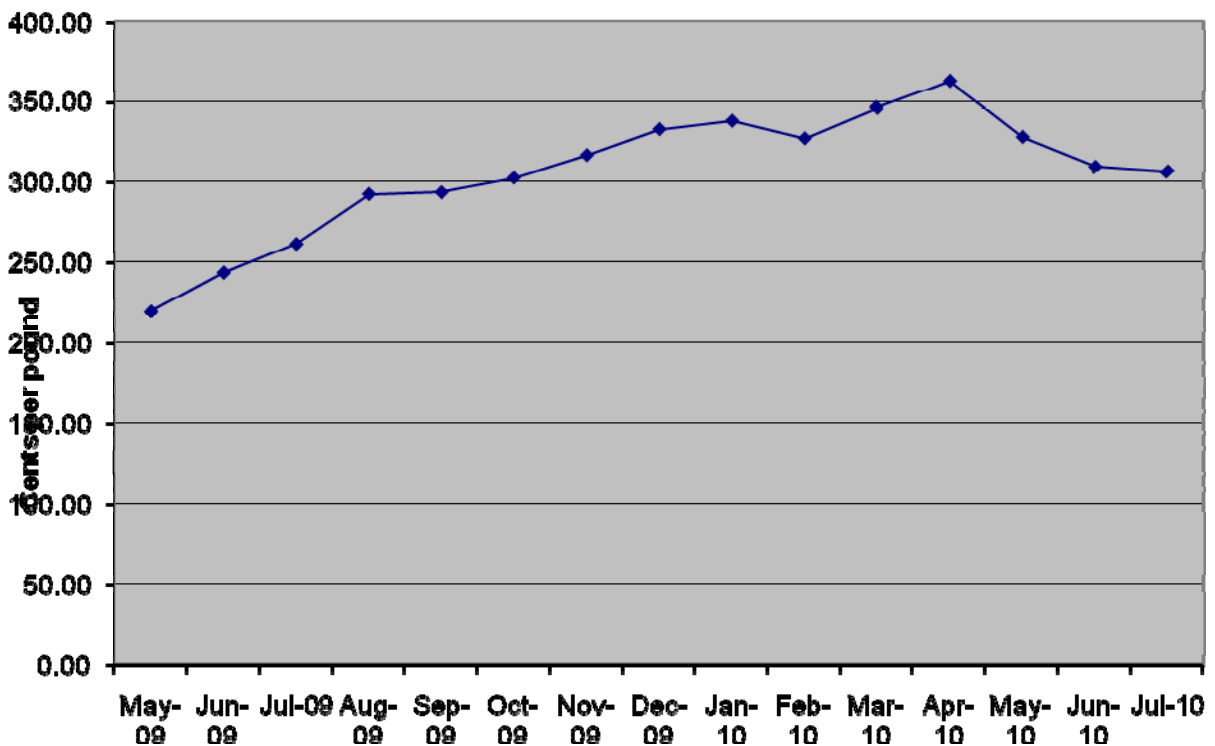
Average price in 2009: \$.83 per pound

Copper and Brass *(cents per pound Comex Cathode and cents per pound copper brass mill number 1)*

Brass (copper brass mill #1 scrap)



Copper (Comex High grade cathode spot close)



Copper and Brass (cont'd)

Price increase announced effective Friday July 30, 2010. Metal selling and scrap value prices will increase by 10 cents per pound. This mirrors the June 17th, 2010 announcement of 10 cents for metal selling and scrap value price. The Freight Fuel Surcharge increased August 25, 2010 to 30% over the standard freight rate, up 3% reflecting the four week rolling average of the national average of diesel fuel.

Brass scrap up 28.29% since July 2009. Copper 17.11% increase July 2009-July2010.

Interestingly brass scrap price is up 1.9% since January; Comex copper down 9.34% same period.

Demand for copper and brass remains lackluster in broader markets as housing starts remain down. Prices on international markets rose based on good news on US jobless data in August.

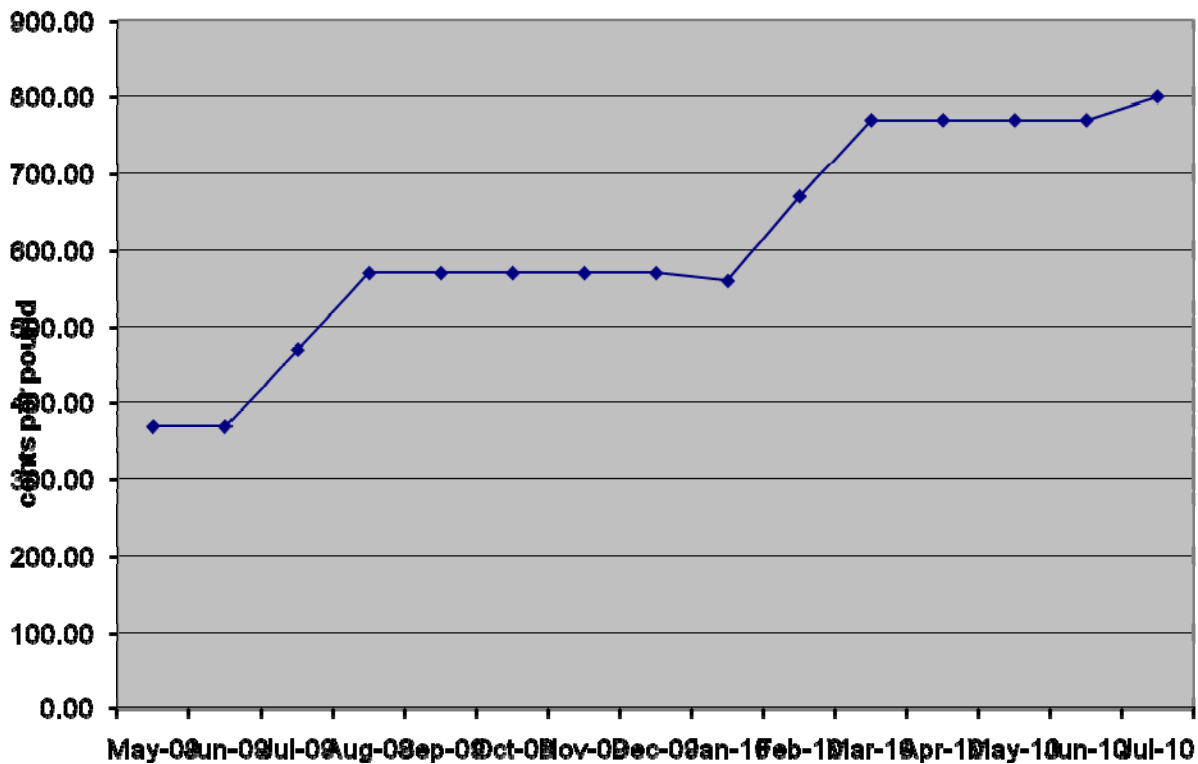
Chinese manufacturing output fell to a 17 month low in July. Not to panic, forecast for China GDP remains a staggering 10.1 % this year. China is the world's largest consumer of copper. China imported 380,000 tonnes of scrap copper in July, up from 350,000 in June.

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

Average price in 2009 (cents per pound): 248.98 per pound

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

Nickel scrap (new clips and solids)



Nickel cont'd

Nickel up 42.86% since January and 70.21% since July 2009.

Nickel is currently trading at 170% of its price last July. So how do you intelligently manage risk when a move in either direction can clobber you? *In this pricing situation watch surcharges and inventory builds on Stainless and Nickel alloys very carefully.*

Average price in 2009: \$4.82 per pound

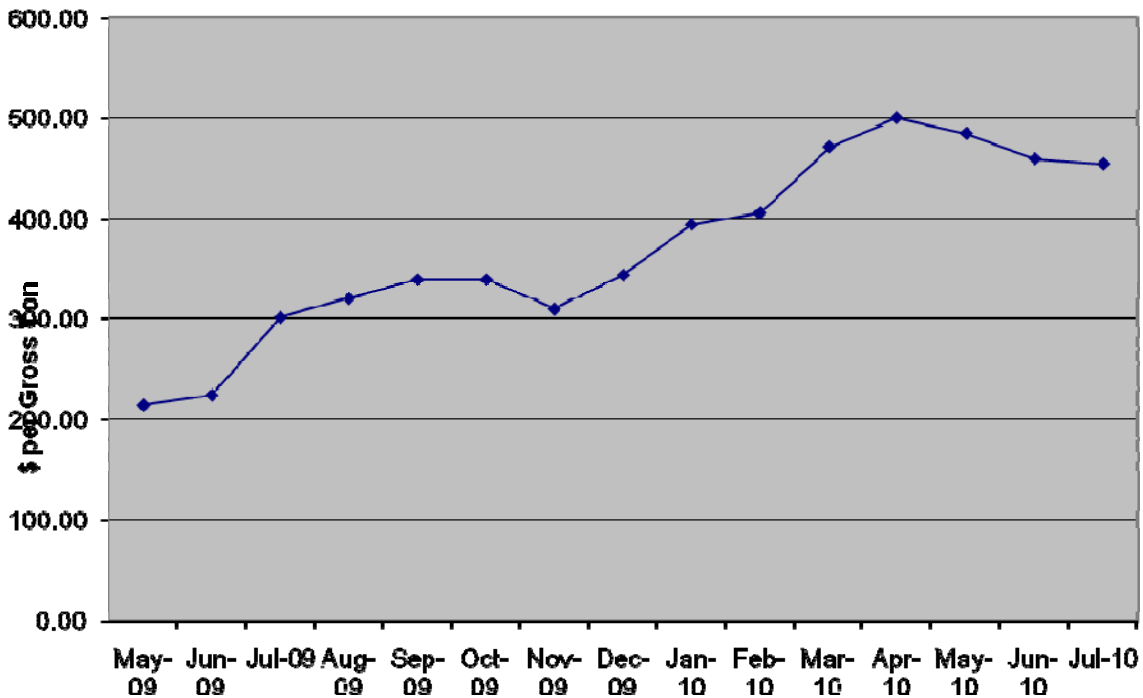
Stainless

Stainless Surcharges: Schmolz + Bickenbach USA *Stainless 303 per pound Raw Materials Surcharges*- January \$0.67; February \$0.70; March \$0.82; April \$0.89. May \$0.98; June \$1.14; July \$1.07; August \$0.94. *These are calculated on a two month lag.*

We are seeing an increasing number of requests for assistance from shops trying to find various stainless steel bar items for machining in today's no-inventory environment. Spot purchases have been reported to be *highly variable* in terms of machinability. (Nickel is a key component of many steel alloy systems, especially stainless.)

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

Steel Scrap (#1 Bushelling)



Surcharges					
	Scrap	Manganese	Alloy 41XX	Alloy 43XX	Alloy 86XX
January	\$11.60	\$0.42	\$2.37	\$11.47	\$4.77
February	\$13.60	\$0.36	\$2.44	\$12.98	\$5.26
March	\$14.15	\$0.35	\$3.10	\$14.01	\$5.96
April	\$15.50	\$ 0.13	\$3.78	\$17.27	\$7.27
May	\$18.75	\$0.46	\$4.24	\$20.31	\$8.49
June	\$15.50	\$0.21	\$4.41	\$22.73	\$9.26
July	\$17.00	\$0.47	\$4.28	\$17.76	\$7.66

Steel busheling up 50.83% since July 2009, 25.49% since January. Holding relatively level for the current time.

Price Increase of \$2.50 announced for September 1 2010.

U.S. service centers' July steel shipments amounted to 2.87 million tons, compared to 3.22 million tons shipped in June, a decline in growth of 10.8%. The July figure remains 14.5% better than the July 2009 rate; however, the July figure follows year-on-year growth of 30.8% in June and 29.4% in May.

U.S. centers steel shipments for the first seven months of 2010 totaled nearly 20.5 million tons, or 18.4% better than January-July 2009. Steel inventories at U.S. services centers totaled 7.46 million tons at the end of July, 30.2% higher than for July 2009.

At current shipping rates, MSCI estimates that the total steel inventory equals a 2.6-month supply, up from a 2.3-month supply at the end of June and a 2.4-month supply at the end of May.

In Canada, service centers' steel shipments totaled 421,900 tons, down 17.8% from the 513,300 tons shipped in June, but 28.6% better than 5.9% better than the June 2009 rate. June had shown a 28.6% improvement over June 2009, and May had been 23.3% better than May 2009.

Canadian steel shipments for January-July totaled roughly 3.3 million tons, 15.2% higher than the seven-month total for 2009. Steel inventories for Canadian service center totaled 1.3 million tons, 29.7% more than was held in stock at the end of July 2009.

MSCI estimates that at current shipping rates the Canadian centers have a 3.1-month supply of steel on hand. At the end of June, their inventories indicated a 2.6- month supply, and at the end of May a 3.0-month supply was in stock.

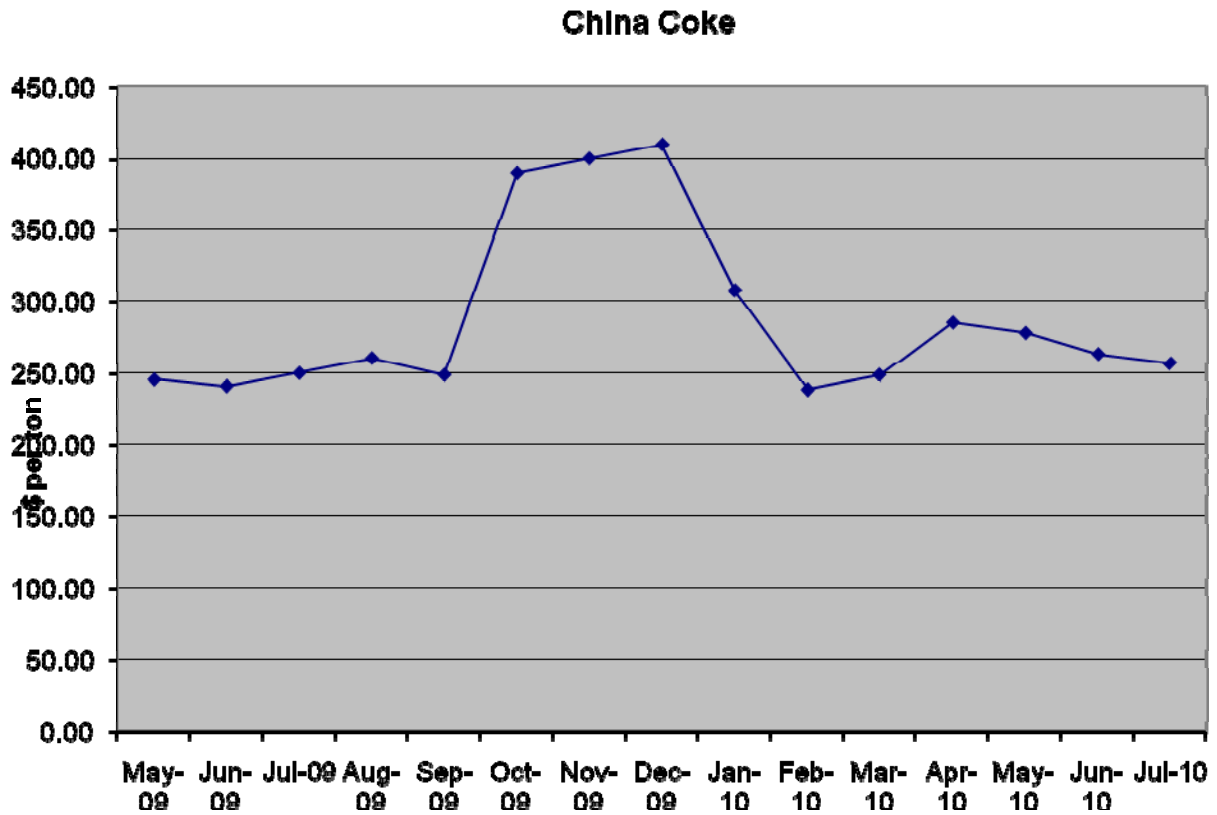
Source: <http://www.ssci.org/news/details.aspx?ArticleID=165>

June Chinese Exports Hitting New High. According to preliminary trade data published on Bloomberg Chinese steel exports jumped again in June, up some 13.8% from May, and up more than four-fold from year-ago levels, hitting 5.62 million tonnes, the highest level since just before the recession began in the fall of 2008. To put the magnitude of the increase into perspective, May Chinese steel exports were actually higher than the entire second quarter of 2009 and 2Q 2010 was up 71% from 1Q 2010.

Chinese steel mills claim they can't meet today's new higher costs, nevertheless, China is importing high-cost raw materials, adding energy and inefficient capital – and then exporting the high-cost finished product back into the West. Chinese exports are running at new highs as Chinese steel production is on pace to hit a 20% uptick from previous all-time highs for the last year, despite steel price declines of some 10%, and cost increases close to 30%. How can they do this? <http://tinyurl.com/23y5ld9>

Average price in 2009: \$276.66 per gross ton

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



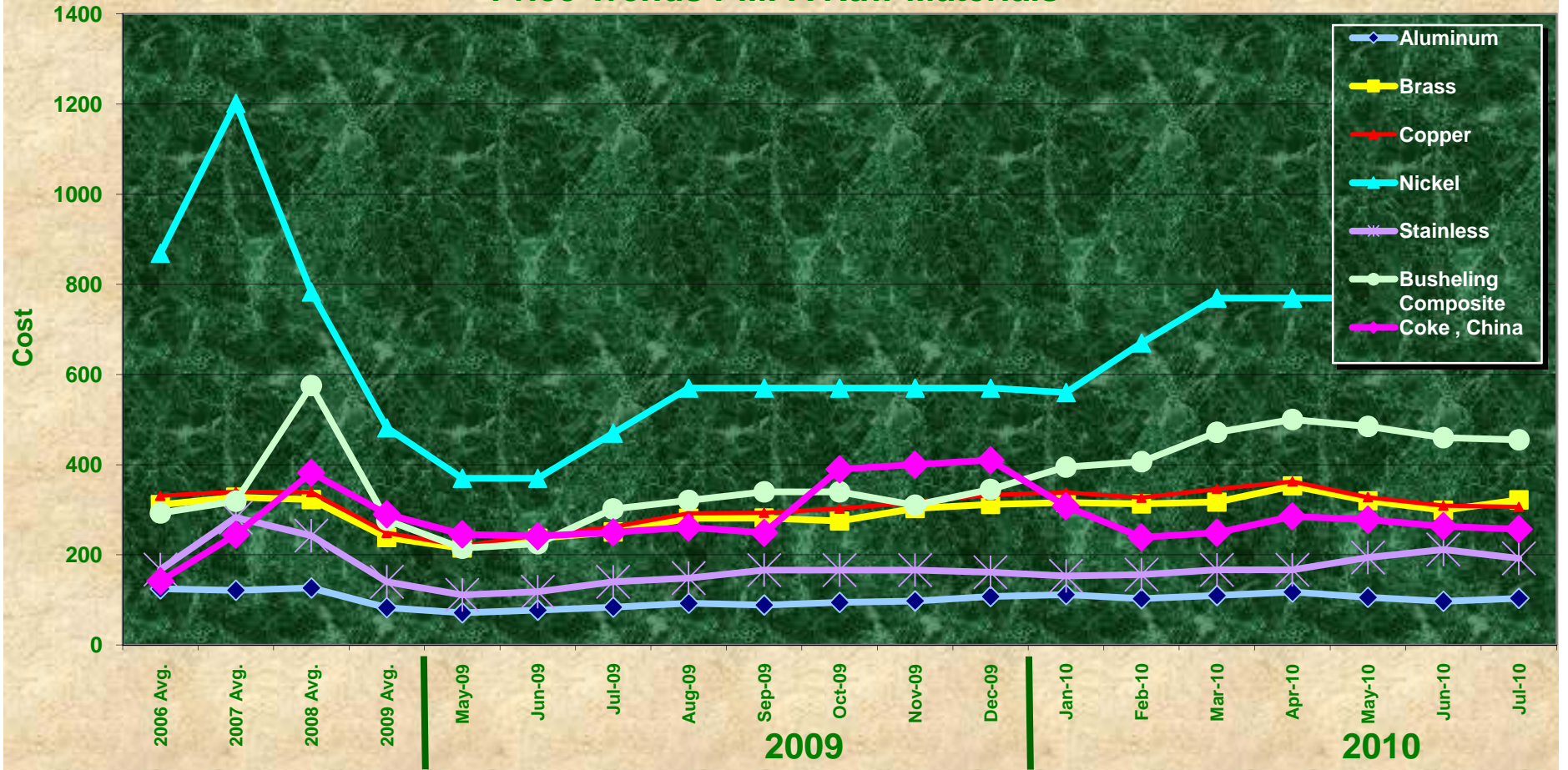
(Coke is used in blast furnaces to make hot metal iron for use in the basic oxygen steelmaking process. China accounts for half of the world's supply of coke, one third of which went to the European Union.)

Average price in 2009: \$290.12 per ton

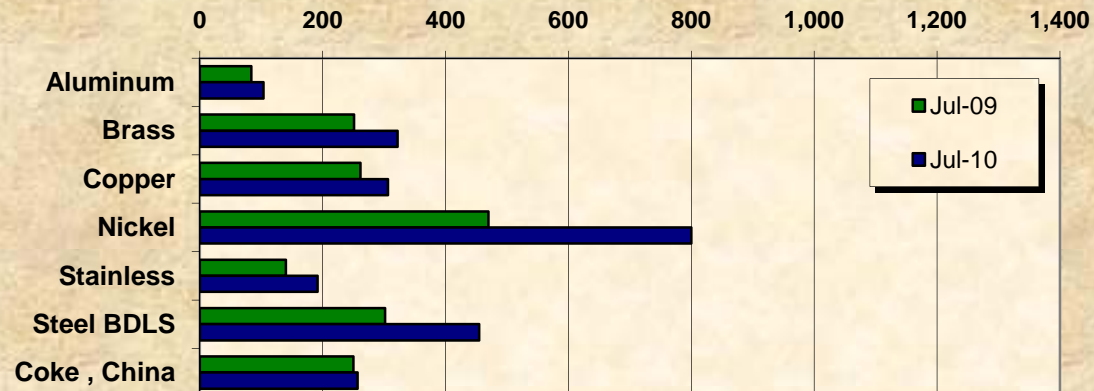
Bottom line for raw materials in August 2010: *Prices are up substantially over their price a year ago, All up by double digit percentages with the exception of Coke. Nickel is on a tear, and both upside and downside risk are present when considering raw materials purchases and long term pricing on the products that we produce. While U. S. Steel production in June was up 65% over a year ago, Chinese steel mill exports to the world increased 320% from June 2009 to June 2010. Washington promised “Change,” but continues to do nothing.*

*-Miles Free
Director, Industry Research and Technology
PMPA
30 August 2010*

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
2006 Avg.	124.62	311.58	331.19	869.17	167.50	293.25	141.75
2007 Avg.	121.49	328.17	339.86	1201.67	282.65	319.17	244.75
2008 Avg.	126.64	322.50	338.99	783.33	242.43	575.50	382.34
2009 Avg.	82.77	238.42	248.98	481.67	140.12	276.86	290.12
May-09	71.50	215.00	219.75	370.00	110.90	215.00	245.71
Jun-09	77.25	237.00	243.80	370.00	118.00	225.00	241.22
Jul-09	84.00	251.00	261.65	470.00	140.00	301.67	250.24
Aug-09	92.75	281.00	292.30	570.00	148.50	320.67	260.73
Sep-09	88.75	282.00	293.45	570.00	166.50	340.00	249.01
Oct-09	94.48	275.00	302.65	570.00	166.50	340.00	390.00
Nov-09	97.81	303.00	316.60	570.00	166.50	310.00	400.00
Dec-09	107.62	312.00	332.75	570.00	161.50	345.00	410.00
Jan-10	111.75	316.00	338.00	560.00	153.00	395.00	308.00
Feb-10	102.71	313.00	327.00	670.00	156.00	406.67	238.80
Mar-10	109.70	317.00	346.00	770.00	166.75	471.67	249.00
Apr-10	117.63	353.00	362.60	770.00	166.75	500.00	285.54
May-10	105.80	320.00	327.85	770.00	194.00	485.00	278.27
Jun-10	97.13	299.00	309.30	770.00	212.00	460.00	263.57
Jul-10	103.69	322.00	306.42	800.00	192.00	455.00	257.00
Jan10- Jan 09 \$Change	36.95	163.00	180.80	110.00	6.00	140.00	52.00
Jan10-Jan09 %Change	49.40	106.54	115.01	24.44	4.08	54.90	20.31
Jan 10- Jul 10 \$Change	103.69	322.00	306.42	800.00	192.00	455.00	257.00
Jan 10- Jul 10 %Change	-7.21	1.90	-9.34	42.86	25.49	15.19	-16.56
Jul 09-Jul 10 \$Change	19.69	71.00	44.77	330.00	52.00	153.33	6.76
Jul 09-Jul 10 %Change	23.44	28.29	17.11	70.21	37.14	50.83	2.70
2009 Average	82.77	238.42	248.98	481.67	140.12	276.86	290.12

Prices are as published, do not include surcharges.

Aluminum, Amm Free Market after September 2009, cents/pc

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 press reports

PMPA Raw Materials Index

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- Delisted on Comex in September 2009, AMM Free Market price thereafter.

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 BDLS	Coke , China
2003	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	
3rd Qtr.	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	
4th Qtr.	71.33	92.67	93.54	410.63	104.44	146.59	
2004	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
1st Qtr.	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
2nd Qtr.	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
3rd Qtr.	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
4th Qtr.	91.67	142.33	146.98	533.33	157.00	425.00	252.67
2005	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
1st Qtr.	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
2nd Qtr.	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
3rd Qtr.	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
4th Qtr.	99.52	194.00	214.27	500.00	166.00	266.67	155.00
2005 Average	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 BDLS	Coke , China
2006	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
1st Qtr.	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
2nd Qtr.	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
3rd Qtr.	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
4th Qtr.	128.07	316.50	338.00	1083.33	244.33	250.00	159.67
2006 Average	124.62	311.58	331.19	869.17	167.50	293.25	141.75
2007	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
1st Qtr.	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
2nd Qtr.	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
3rd Qtr.	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
4th Qtr.	113.50	327.33	342.02	980.00	241.85	328.33	332.33
2007 Average	121.49	328.17	339.86	1201.67	282.65	319.17	244.75

Table A Supplemental Calculations

**Quarterly Averages
PMPA Material Impacts**

	Aluminum	Brass	Copper	Nickel	Stainless	Steel BDLS	Coke , China
2008	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
1st Qtr.	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
2nd Qtr.	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
3rd Qtr.	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
4th Qtr.	95.62	203.33	215.72	443.33	212.37	311.67	220.50
2008 Average	126.64	322.50	338.99	783.33	242.43	575.50	382.34
2009	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
1st Qtr.	69.68	163.00	168.13	450.00	129.00	243.33	265.87
	70.00	216.00	220.35	370.00	116.00	195.00	236.93
	71.50	215.00	219.75	370.00	110.90	215.00	245.71
	77.25	237.00	243.80	370.00	118.00	225.00	241.22
2nd Qtr.	72.92	222.67	227.97	370.00	114.97	211.67	241.29
	84.00	251.00	261.65	470.00	140.00	301.67	250.24
	92.75	281.00	292.30	570.00	148.50	320.67	260.73
	88.75	282.00	293.45	570.00	166.50	340.00	249.01
3rd Qtr.	88.50	271.33	282.47	536.67	151.67	320.78	253.33
	94.48	275.00	302.65	570.00	166.50	340.00	390.00
	97.81	303.00	316.60	570.00	166.50	310.00	400.00
	107.62	312.00	332.75	570.00	161.50	345.00	410.00
4th Qtr.	99.97	296.67	317.33	570.00	164.83	331.67	400.00
2009 Average	82.77	238.42	248.98	481.67	140.12	276.86	290.12
2010	111.75	316.00	338.00	560.00	153.00	395.00	308.00
	102.71	313.00	327.00	670.00	156.00	406.67	238.80
	109.70	317.00	346.00	770.00	166.75	471.67	249.00
1st Qtr.	108.05	315.33	337.00	666.67	158.58	424.45	265.27
	117.63	353.00	362.60	770.00	166.75	500.00	285.54

Table A Supplemental Calculations

**Quarterly Averages
PMPA Material Impacts**

	Aluminum	Brass	Copper	Nickel	Stainless	Steel BDLS	Coke , China
	105.80	320.00	327.85	770.00	194.00	485.00	278.27
	97.13	299.00	309.30	770.00	212.00	460.00	263.57
2nd Qtr.	106.85	324.00	333.25	770.00	190.92	481.67	275.79