



Material Impacts On The Precision Machining Industry

October 2007

Agreement Issue: Six Out Of Seven Commodities Agree...

Executive Summary

Six out of seven commodities that we track are lower in September than July; GM and UAW have reached agreement; (Ford and Chrysler are nowhere near an agreement at this time). Republic Engineered Products and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers Union recently inked a five year labor contract.

Depressed demand for metals may be the result of slowing manufacturing growth worldwide; however the worldwide crunch in credit triggered by the US sub-prime housing market crash may also be a factor.

Service center inventories continue to fall and are currently at 20 month lows. September import licenses for steel fell nearly 10% to 2.1 million metric tones from 2.3 million in August. If actual deliveries follow the licenses, we can expect the landing of imported steel goods to be the lowest in the past two years.

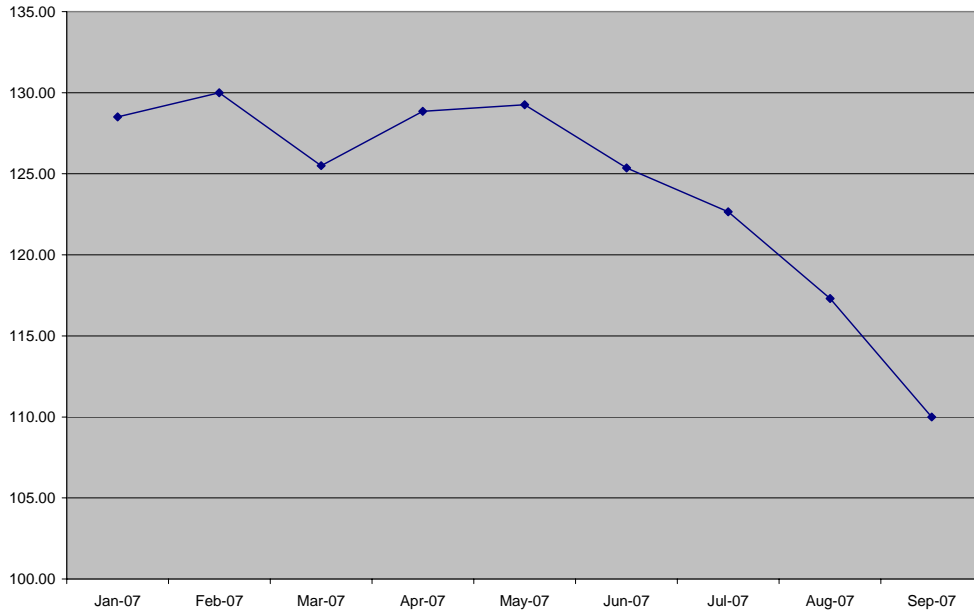
Falling demand may not necessarily prevail over low supplies causing prices to fall even further. Producers' discipline about maintaining margin vs. growing market share at a loss is helping keep supply in check. And lower inventories throughout today's "lean supply chains" are also holding supply to a minimum.

The weaker dollar is also helping commodities hold their value. However we believe that prices may actually increase for many products in the fourth quarter based on continued tight inventories and supplies. Surcharges are adjusting, and we have heard of at least one steel mill planning on a price increase later this year.

The latest press release from the International Nickel Study Group posits a 120,000 metric tonne surplus in nickel production this year, so it may be that the peak in Nickel (and stainless and super alloys) is behind us. Indeed, the Spring 2007 prices of many metals that we track appear to be the peak of a breathtaking run (three years that we have tracked them), and while prices are falling, they are falling not back to earth, but to the relatively high levels that we saw last year.

Aluminum (cents per pound Comex Spot close)

Aluminum 2007 (Comex spot close)



Interval	% Change	\$ Change	Commodity Price (cents/lb)	Aug 2007	Sept 2007
Jan2007-Jan2006	11.26	13.00	Maximum	111.73	110
Jan2007-Sept 2007	-14.40	-18.50	Most Frequent	105.55	108

The average price of aluminum in 2006 was up 35.16% over the average in 2005.

The graph says it all.

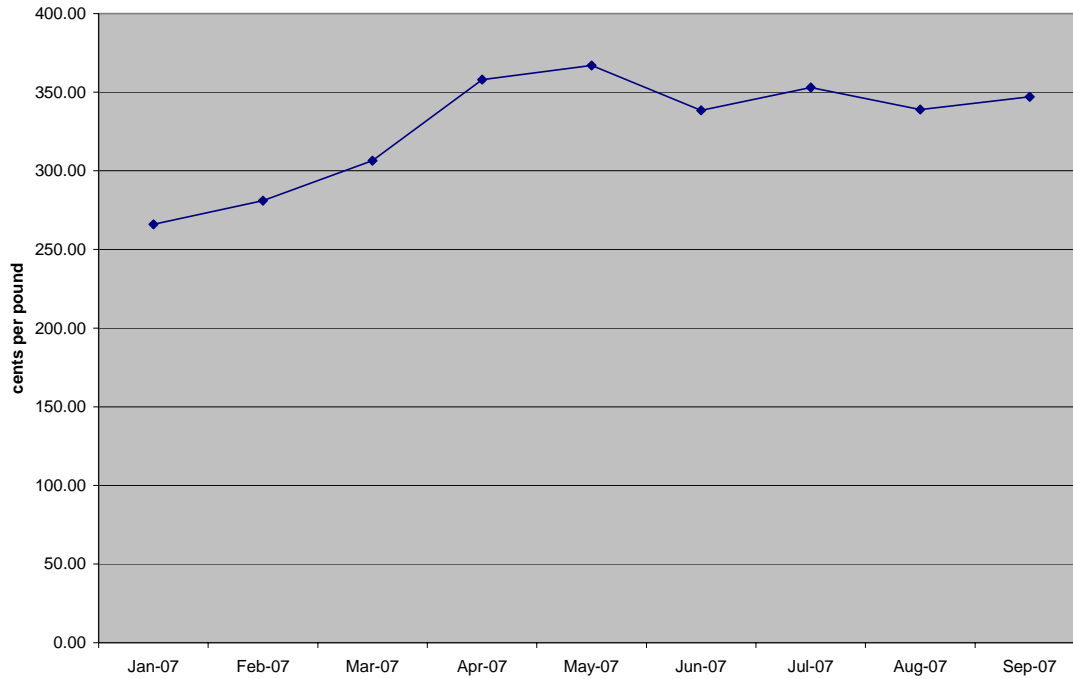
Aluminum prices have fallen 14% from January to the end of September. Aluminum is getting close to the \$1.00 per pound mark that we saw last in November of 2005. U.S. demand for the first seven months of 2007 is down 3.9 % compared to last year according to the Aluminum Association. *The aluminum commodity that we track is currently selling for below last year's average price.*

Average price in 2006: \$1.25 per pound

(Energy is the main issue for aluminum producers, and increases in energy costs find their way quickly into the light metal's pricing. Increasing energy prices do not bode well for a strong and sustainable aluminum industry in North America. China is power short, which makes this material especially problematic for their planners.)

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

Brass (copper brass mill #1 scrap)

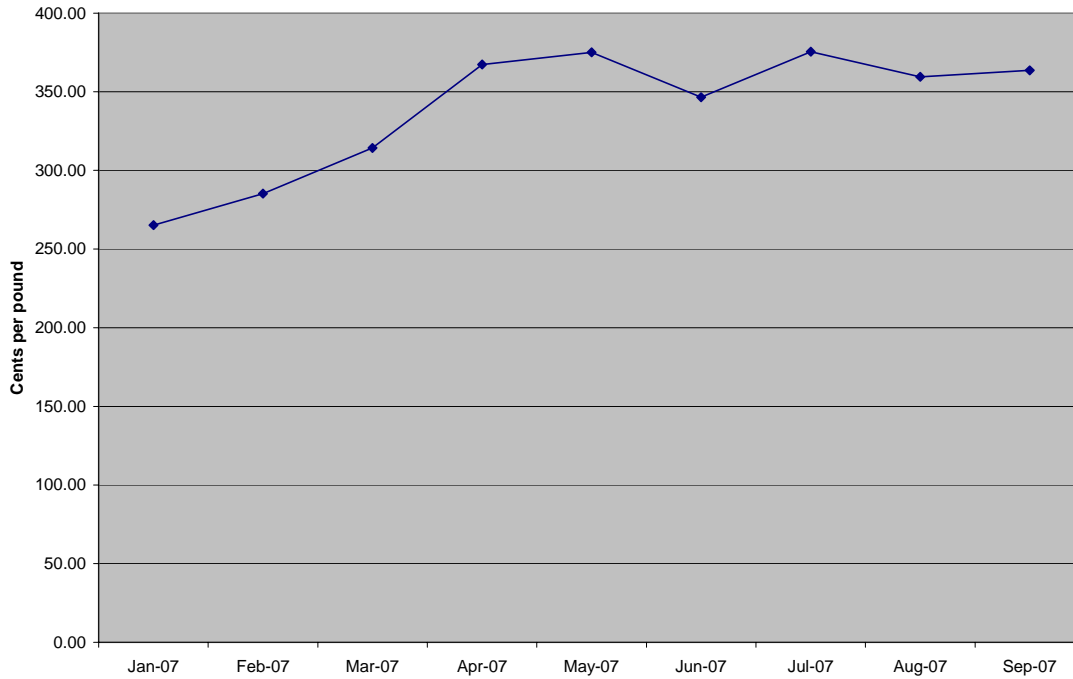


<i>Interval</i>	<i>% Change</i>	<i>\$ Change</i>	<i>Commodity Price (cents/lb)</i>	<i>Aug 2007</i>	<i>Sept 2007</i>
<i>Jan2007-Jan2006</i>	20.36	45.00	<i>Maximum</i>	339	347
<i>Jan2007-Sept 2007</i>	30.45	81.00	<i>Most Frequent</i>	299	312

Discussion follows copper below.

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

Copper (comex High grade cathode spot close)



Interval	% Change	\$ Change	Commodity Price (cents/lb)	Aug 2007	Sept 2007
Jan2007-Jan2006	15.46	35.50	Maximum	359.50	363.6
Jan2007-Sept 2007	37.13	98.45	Most Frequent	337	363

Fuel surcharge seen increased by 3% to ~30% above standard freight rate. Energy Surcharge Zero.

Prices remain above last year's average for the red metal (OK, mostly its yellow metal in our shops) up 30-37% since January. And January 2007 price was up 15.5 % over January 2006. High grade cathode is **up 4.8 times the June 2003 price when it traded at 77 cents per pound. These materials have remained above \$2.00 per pound for 21 months in a row.**

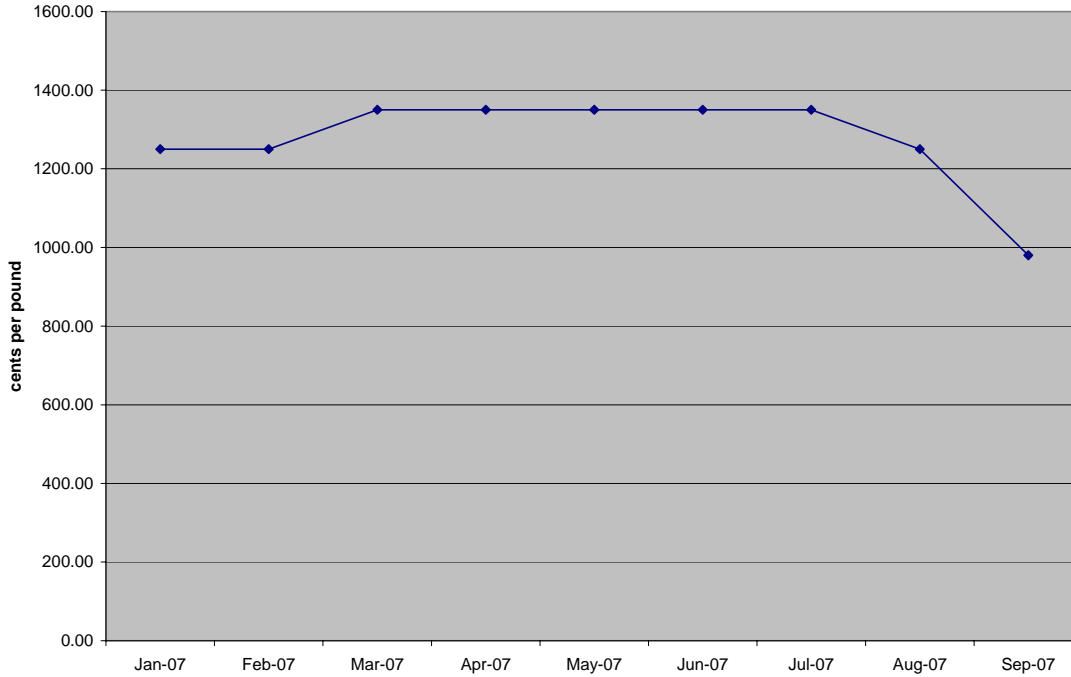
We recently attended the Copper Development Association's Global Market Summit, where we learned that of all the metals, Copper is the closest to mirroring GDP. ***The continued push for "Green" in all areas of the economy is a positive indicator for increased usage of copper and thus sustained higher prices. Example: Hybrid automobiles contain over 2X the amount of Copper of traditional autos.***

Copper and brass exports were down significantly in July compared to months prior.

Average price in 2006: \$3.31 per pound.

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

Nickel scrap (new clips and solids)



Interval	% Change	\$ Change	Commodity Price (cents/lb)	Aug 2007	Sept 2007
Jan2007-Jan2006	127.27	700	Maximum	12.50	9.80
Jan2007-Sept 2007	-21.60	-270	Most Frequent	9.70-9.80	9.70-9.80

The average price of nickel in 2006 was up 57.08% over the average in 2005.

Nickel markets remain unsettled as a result of a press release from the International Nickel Study Group announcing that 2007 will close with a **120,000 metric tonne surplus in nickel production this year.**

Average price in 2006: \$8.69per pound.

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

Stainless

Stainless Surcharges for October 2007: UgitechUSA Stainless 303 per pound **Raw Materials Surcharge- October 2007: \$1.51; this is based on a two month lag.**

Surcharges on Stainless Steel have started to fall based on weakening Nickel prices worldwide. The UgitechUSA USA website <http://www.ugitechusa.com/surcharges.html> Shows surcharges declining over the period of September -November for grade 303: September \$1.51, October \$1.25, November \$1.33. Because the surcharges are backward looking, we may expect to see further declines in coming months.

No, there is NOT any Hexavalent Chromium in Stainless Steels:

http://www.ssina.com/news/releases/pdf_releases/02_22_06.pdf

Stainless Steel

The Specialty Steel Industry of North America (SSINA) released the latest available statistical data on imports, U.S. consumption and import penetration for YTD May 2007 compared to the same 2006 five-month period.

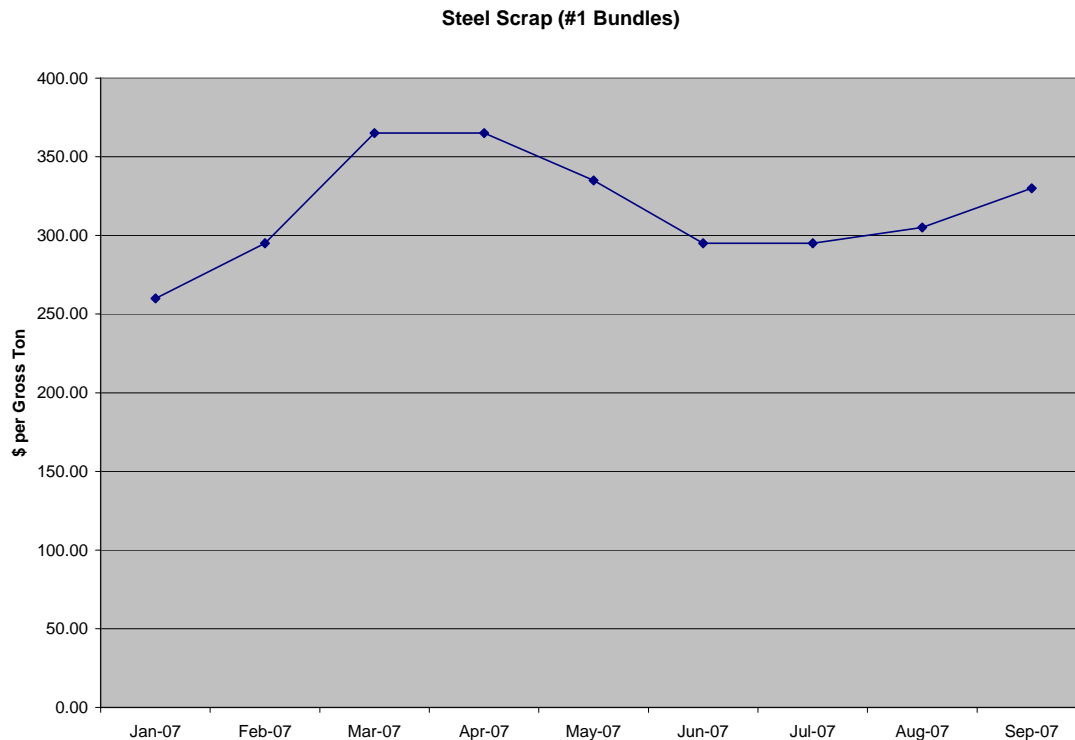
- Stainless steel bar: Imports in YTD May 2007 were 54,195 tons, a 22% increase compared to YTD May 2006;
- U.S. consumption was 104,593 tons, a 16% increase;
- Five-month import penetration was 52%, a three percentage point increase.

ITA data shows stainless imports (all stainless products) down 7% for August 2007 compared to August 2006; down 5.93% July 2007 to August 2007.

http://ia.ita.doc.gov/steel/license/news/monthly_SIMA_factsheet.pdf

The different months reported explain the differences in these indicators.

Steel (dollar per gross ton, Consumer Number 1 bundles, Chicago)



Steel, cont'd

<i>Interval</i>	<i>% Change</i>	<i>\$ Change</i>	<i>Commodity Price (\$/gr.ton)</i>	<i>Aug 2007</i>	<i>Sept 2007</i>
<i>Jan2007-Jan2006</i>	-7.14	-20.00	<i>Maximum</i>	305	330
<i>Jan2007-Sept 2007</i>	26.92	70.00	<i>Most Frequent</i>	305	330

The average price of steel bundles in 2006 was up 15.2% over the average in 2005. Up 12.5% year to date.

Surcharges: October 2007 Material Surcharges for Cold Finished Bars: \$8.35

Production, Shipments, Inventories

In the week ending September 29, 2007, domestic raw steel production was 2,125,000 net tons while the capability utilization rate was 89.8 percent. Production was 2,147,000 tons in the week ending September 29, 2006, while the capability utilization then was 91.2 percent. The current week production represents a 1.0 percent decrease from the same period in the previous year. Production for the week ending September 29, 2007 is up 1.1 percent from the previous week ending September 22, 2007 when production was 2,101,000 tons and the rate of capability utilization was 88.8 percent.

Adjusted year-to-date production through September 29, 2007 was 79,394,000 tons, at a capability utilization rate of 85.6 percent. That is a 4.9 percent decrease from the 83,485,000 tons during the same period last year, when the capability utilization rate was 90.1 percent. Source: www.steel.org

Shipments of steel products from U.S. metals service centers totaled 4.4 million tons, a decline of 14.3% from the same month a year ago and the 10th consecutive month of year-over-year shipment reductions. Canadian steel shipments fell 13.6%, to 311,800 tons, marking the 11th consecutive month of year-over-year declines there.

Shipments of steel products from U.S. metals service centers fell 8.4%, to 4.64 million tons, compared with August 2006 shipments. Shipments for the first eight months of the year, at 36.1 million tons, are 7.8% lower than during the same period last year. In Canada, steel shipments from metals service centers totaled 315,500 tons in August, down 6.3% from a year ago. Year-to-date shipments of 2.53 million tons are down 8.0%.

U.S. steel inventories at the end of August totaled 13.0 million tons, or 18.2% below year-earlier totals. U.S. steel inventories are at their lowest level since December 2005, when inventories totaled 12.9 million tons. At current shipping rates, U.S. steel inventories represent a 2.8-month supply. In Canada, inventories of about 1.2

million tons are down 18.6% from August 2006 and at their lowest level since March 2006. At current shipping rates, this represents a 3.8-month supply. Source: www.MSCI.org

Average price in 2006: \$293.25 per gross ton.

Coke (Chinese) (\$ per metric tonne)



The average price of Chinese Coke in 2006 was down 32.1% over the average in 2005.

We have documented a \$250 FOB price of Coke this report. Supply constraints, changes in export tax schemes, prioritizing rail shipments for steam coal for much needed power are apparent drivers.

Average price in 2006: \$141.75 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.)

China Developments

China and Materials: here's a great read about the global iron ore miners vs. Chinese steelmakers vying for advantage from the land down under: <http://tinyurl.com/2nn4xd>

So much for agreement with price trends everywhere else: Sales Prices of China's Main Nonferrous Metals Continue to Rise in August According to statistics released by the Chinese National Development and Reform Commission on September 26th, China continued to see higher sales prices for nonferrous metals in August 2007. The average spot price of copper and zinc was RMB65,800/t and RMB28,300/t in the same month respectively, up 0.9% and 2.8% month-on-month but down 4.5% and 2.5% year-on-year. The sales price of electrolytic aluminum fell to RMB19,600/t, down 2.4% month-on-month and 0.9% year-on-year, and the sales price of lead reached RMB24,900/t, up 4.8% month-on-month and 2.4 times year-on-year.

Great report on the effect of Chinese demand for global commodities:

http://hotdocs.usitc.gov/docs/pubs/research_working_papers/pub3864-200606.pdf

(This is a large download – 108 pages)

Currency: Still no substantive action on the revaluation of the Yuan.

<http://tinyurl.com/22t7fj>

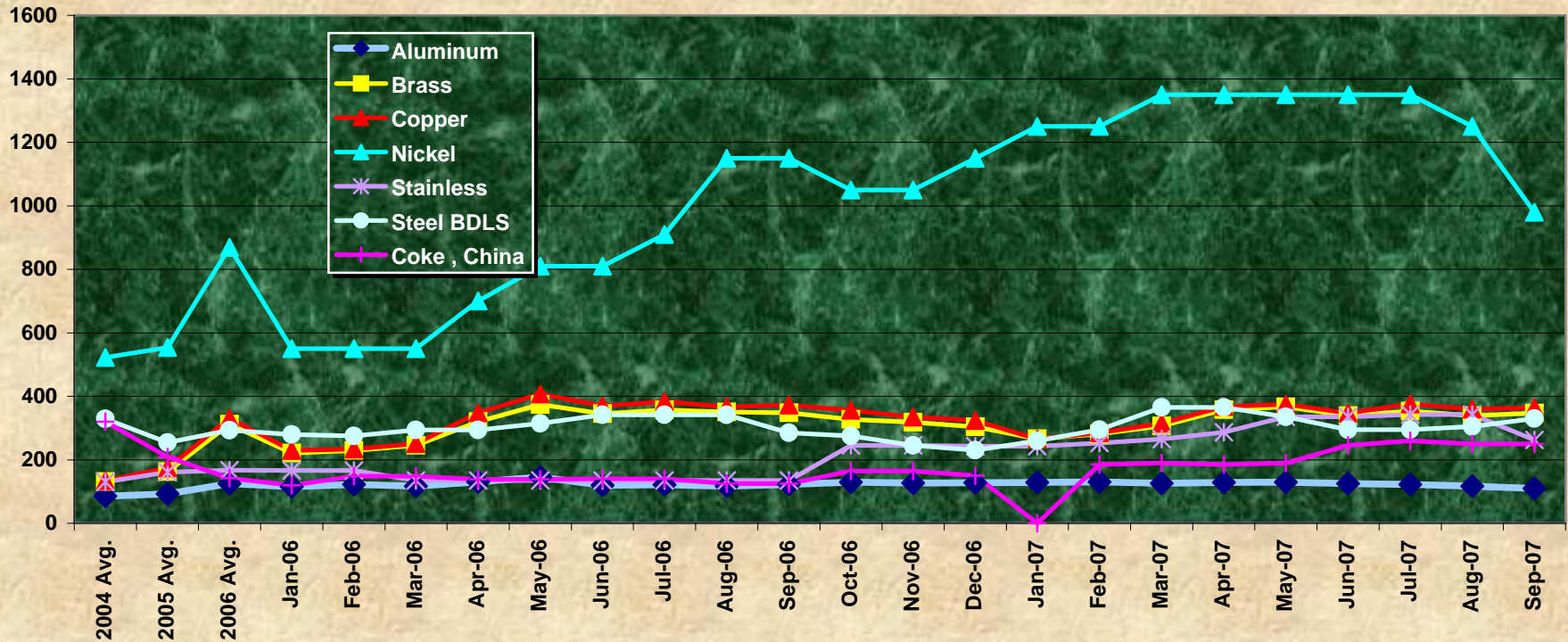
The federal government's lack of **ACTION** on the manipulation of currency exchange rates by the Chinese government remains a critical concern for the sustainability of North American Manufacturing. *If not now, when?*

-Miles Free

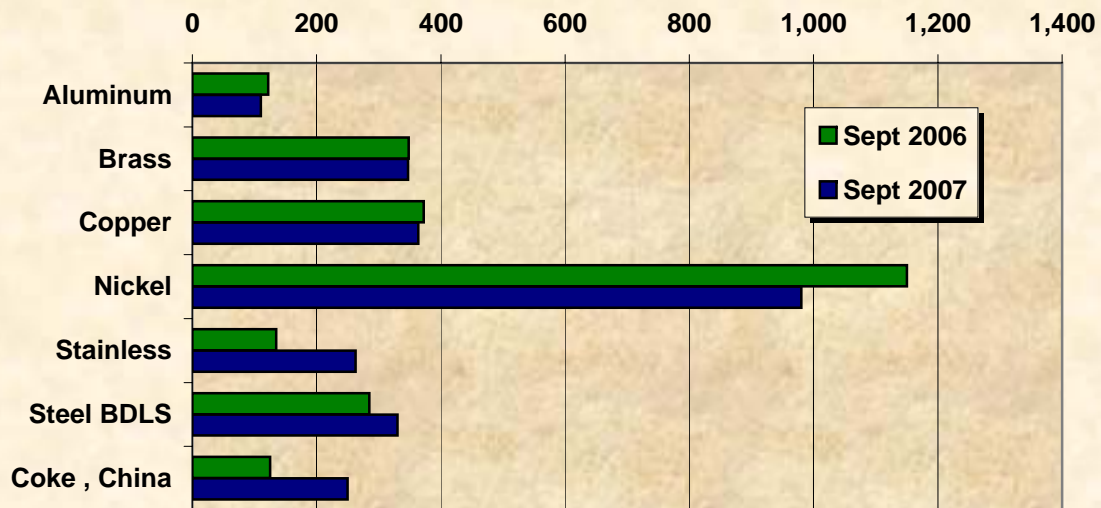
Director, Industry Research and Technology

Precision Machined Products Association

PMPA RAW MATERIAL PRICE TRENDS



Year Over Year Raw Material Price Comparison



PMPA Raw Materials Index

	Aluminum	Brass	Copper	Nickel	Stainless	Steel BDLS	Coke , China
2004 Avg.	85.74	131.36	133.86	522.29	130.46	329.33	319.79
2005 Avg.	92.19	162.75	174.23	553.33	160.50	254.58	208.75
2006 Avg.	124.62	311.58	331.19	869.17	167.50	293.25	141.75
Jan-06	115.50	221.00	229.65	550.00	166.00	280.00	120.00
Feb-06	122.25	229.00	233.65	550.00	166.00	275.00	148.00
Mar-06	116.50	245.00	250.35	550.00	135.00	294.00	148.00
Apr-06	130.60	320.00	348.30	700.00	135.00	294.00	138.00
May-06	146.00	373.50	407.55	810.00	135.00	315.00	138.00
Jun-06	120.00	345.00	369.10	810.00	135.00	342.00	140.00
Jul-06	121.50	357.00	382.95	910.00	135.00	342.00	140.00
Aug-06	116.60	351.00	366.50	1150.00	135.00	342.00	125.00
Sep-06	122.25	348.00	372.20	1150.00	135.00	285.00	125.00
Oct-06	129.10	327.50	356.00	1050.00	245.00	275.00	164.50
Nov-06	127.10	318.00	334.55	1050.00	245.00	245.00	164.50
Dec-06	128.00	304.00	323.45	1150.00	243.00	230.00	150.00
Jan-07	128.50	266.00	265.15	1250.00	243.00	260.00	
Feb-07	130.00	281.00	285.25	1250.00	253.00	295.00	185.00
Mar-07	125.50	306.50	314.35	1350.00	265.00	365.00	190.00
Apr-07	128.85	358.00	367.40	1350.00	287.00	365.00	185.00
May-07	129.25	367.00	375.05	1350.00	335.00	335.00	190.00
Jun-07	125.35	338.50	346.55	1350.00	335.00	295.00	245.00
Jul-07	122.65	353.00	375.40	1350.00	342.80	295.00	260.00
Aug-07	117.30	339.00	359.50	1250.00	342.80	305.00	250
Sep-07	110.00	347.00	363.60	980.00	262.63	330.00	250
Jan07- Jan 06 \$Change	13.00	45.00	35.50	700.00	77.00	-20.00	#VALUE!
Jan07-Jan06 %Change	11.26	20.36	15.46	127.27	46.39	-7.14	#VALUE!
Sept07- Jan07 \$Change	-18.50	81.00	98.45	-270.00	19.63	70.00	#VALUE! *
Sept07-Jan07 %Change	-14.40	30.45	37.13	-21.60	8.08	26.92	#VALUE!
2005 Average	92.19	162.75	174.23	553.33	160.50	254.58	208.75
2006 Average	124.62	311.58	331.19	869.17	167.50	293.25	141.75

Table A

PMPA Raw Materials Index

YTY%Change	35.17	91.45	90.08	57.08	4.36	15.19	-32.10
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2005 Average Calculation updated August 2006

*Coke only: change calculated Dec2004-July 2004

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
SteelBdls, #1, AMM Chicago, \$/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 and can provide a "calibration" of your actual numbers to compare to your own experience.

Steel Bdls #1- AMM Chicago. This indicator was selected as it is indicative of make up of Electric Furnace process Steels for Special bar quality. While other scrap types are blended into a heat, the #1 bundle indicator is the best glimpse of price vs quality for electric furnace melted steels. Typically 95% or more of an electric furnace melt is scrap. This indicator was also chosen because it plays a part in the calculation of some suppliers material 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.***

PMPA Raw Materials Index

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

**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	150.00
	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	175.00
	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