



Material Impacts On The Precision Machining Industry

October 2008

Drop in Demand, ‘Stealth Production Cuts’ And Yet, Some Prices Remain Stubbornly High

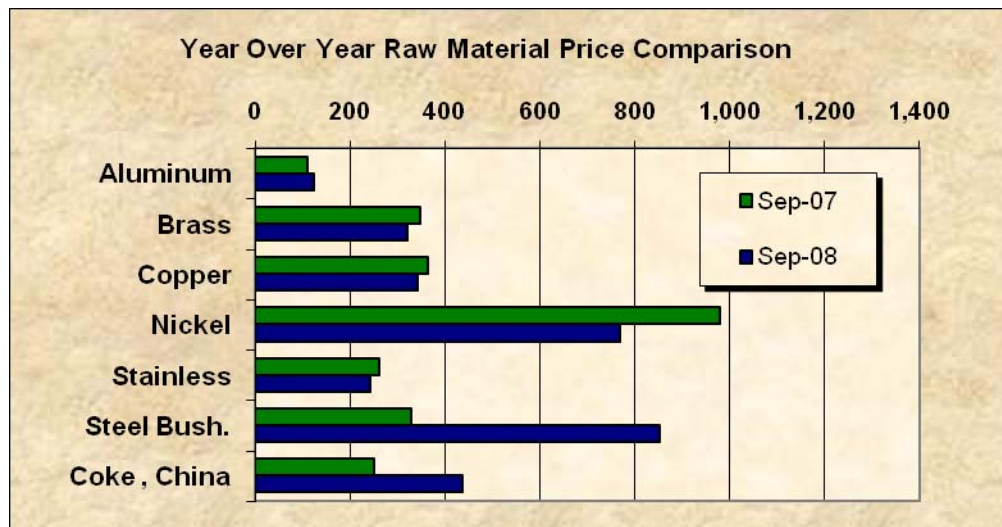
Executive Summary

Editors Note: This issue is an abbreviated version due to staff travel.

“Manufacturing had avoided much of the decline that we’d seen brought on by the financial services sector,” “The economic environment remains volatile.”

“The world is engulfed in a massive crisis of confidence in financial institutions”

Among the “Financial Rescue” funds passed last Friday, we find \$162 million in tax incentives for recyclers and \$25 billion in ‘Bailout money’ for the Big 3 Automakers in Detroit <http://tinyurl.com/44p4me>. We don’t seem to recall such government largesse when it was the steel industry forced into the fire by the markets... Nor when the small manufacturers first faced the onslaught of cheap Asian imports. No comments yet on where the lipstick is on this pile of pork! Time will tell if these funds are targeted specifically to just these specific industries, or, for example, if recycling equipment in our shops will also receive favorable tax treatment.



Quick Summary: Only Aluminum, Steel and Coke are higher compared to same month last year, September 2007; other items we track have fallen substantially. Aluminum is up 3.9% since January; down 17% since July. Brass Scrap is up 0.6% since January; down 14.8% since last report in July. Copper Cathode is up 3.4% for year; down 15.9% since July. Scrap Nickel is down 21% since January; down 8% since July. Steel #1 Busheling is up 105% since January; down 4 % since July. (Actually, using October numbers, this commodity is up 37.3% over January and down 35.9% from July.) China Coke is up 58% since January; down 49.9% since July.

Coke in China is anticipated to slide moderately over the remainder of 2008 due to decreasing demand from downstream steel producers” according to a report from Interfax-China. Producers in ShangXi province have cut prices by 100 yuan (~\$14.60) per ton. Weak demand, increase in export tariff were cited for the cut.

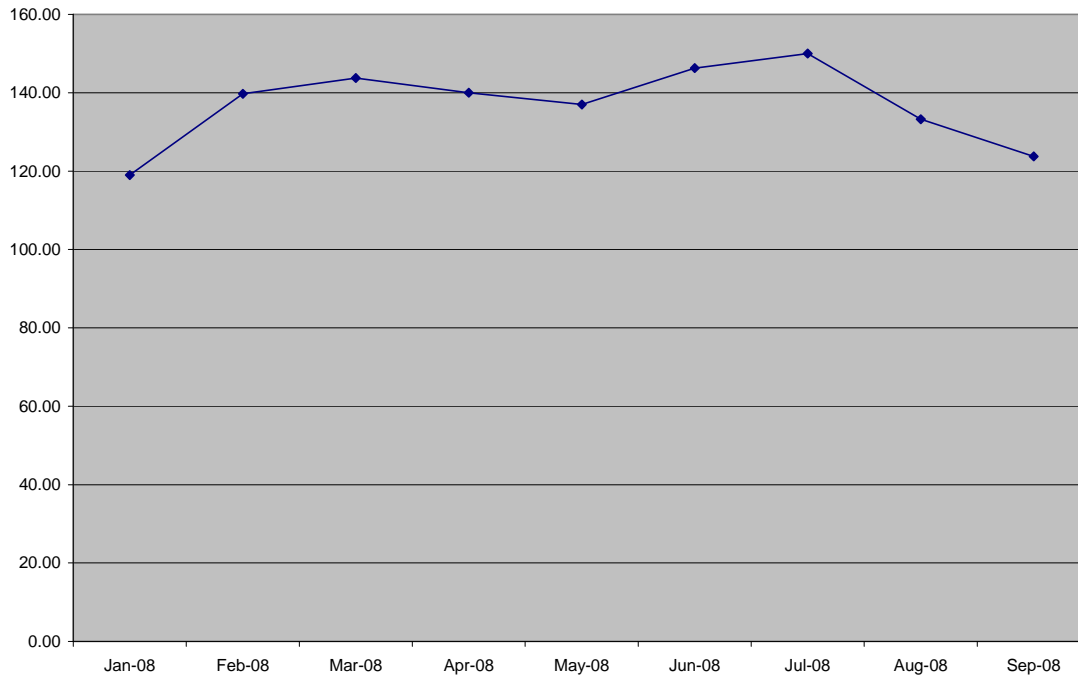
The benchmark commodity that we follow, #1 Steel Bundles, Chicago, is no longer tracked due to changes in the way the automakers sell their stamping scrap. Effective with June 2008 data, we are reporting the AMM #1 Busheling, composite price (Chicago, Cleveland, and Pittsburgh) as our indicator for price of steel scrap. It has tracked essentially the same as #1 bundles over the last two years.

At the time of preparation of this report, #1 Busheling had already fallen over 33 % from the price we reported for July in our last report (\$890 long ton). Republic Engineered Products had announced a \$2.50 per cwt, \$50 per ton price increase on all Wire and Cold Finished Bar products. The North American price of steel continues to be driven by global events including Coke production cutbacks in China, iron ore pricing in Australia and Brazil, and scrap buys by steelmakers in the Middle East.

Please see the Analysis of Foreign Currencies prepared by Georgetown Economic Services posted along with this report.

Aluminum (*cents per pound Comex Spot close*)

Aluminum 2008 (Comex spot close)



Aluminum is up 3.9% since January 2008; down 17% since July.

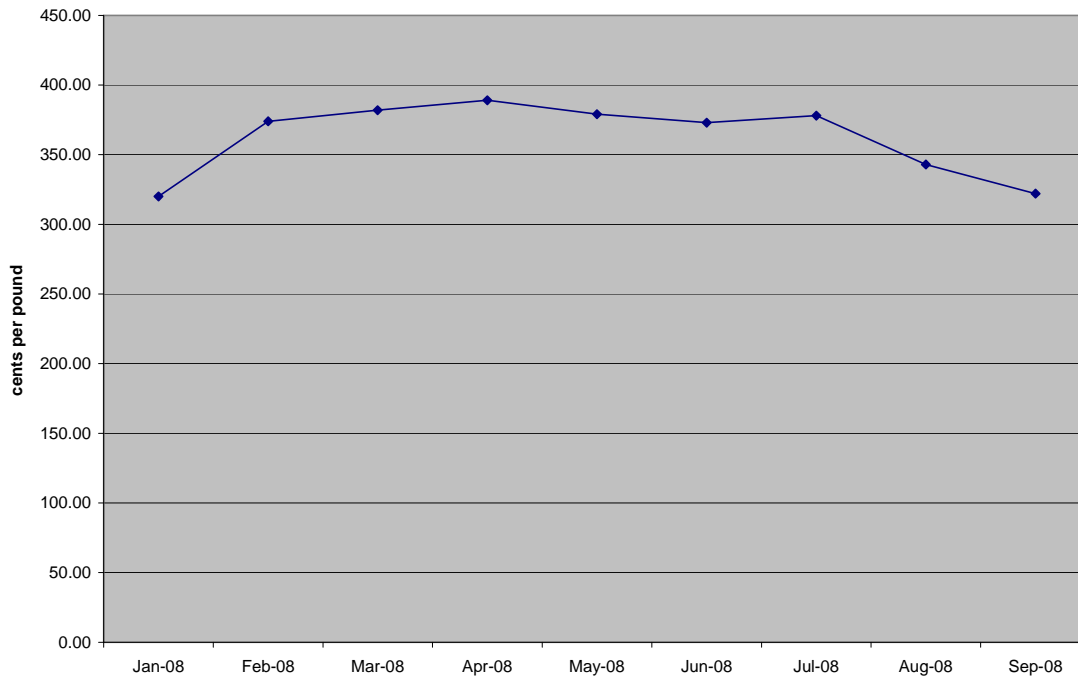
<i>Interval</i>	<i>% Change</i>	<i>\$ Change</i>	<i>Commodity Price (cents/lb)</i>	<i>Aug 2008</i>	<i>Sept 2008</i>
<i>Jan2008-Jan2007</i>	-8.23	- 9.50	<i>Maximum</i>	133.25	123.50
<i>Sept2008-Jan 2008</i>	3.99	4.75	<i>Most Frequent</i>	125-126	114-115

Average price in 2007: \$1.22 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. Recycling saves 95% of the energy needed to produce Aluminum. 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)

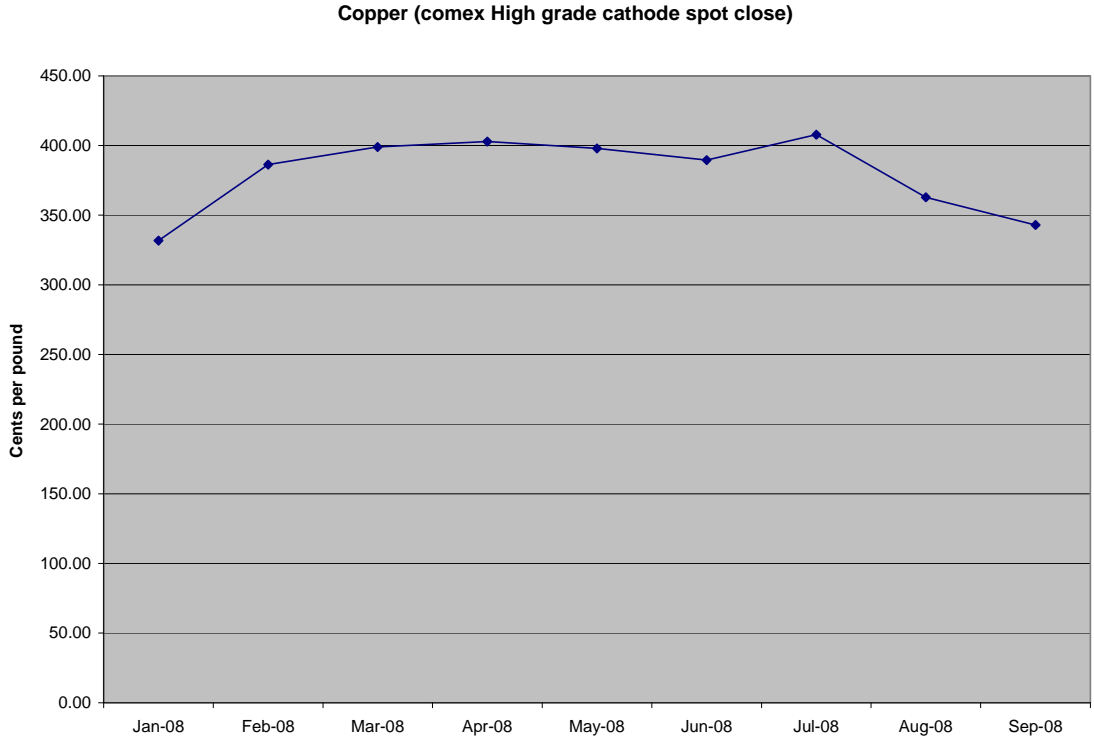


Average price in 2007: \$3.28 per pound.

Brass Scrap is up 0.6% since January; down 14.8% since last report in July.

<i>Interval</i>	<i>% Change</i>	<i>\$ Change</i>	<i>Commodity Price (cents/lb)</i>	<i>Aug 2008</i>	<i>Sept 2008</i>
<i>Jan2008-Jan2007</i>	24.43	54.00	<i>Maximum</i>	343	322
<i>Sept 2008-Jan 2008</i>	0.63	2.00	<i>Most Frequent</i>	328-329	300-301

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



Copper Cathode is up 3.4% for year; down 15.9% since July.

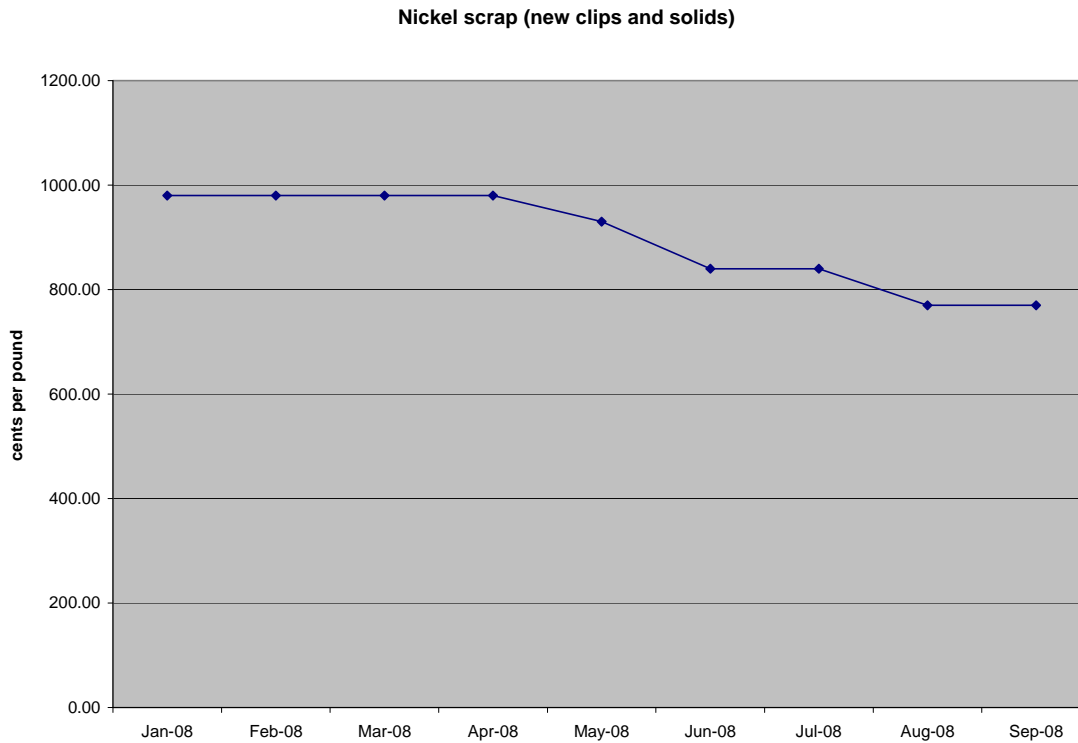
Interval	% Change	\$ Change	Commodity Price (cents/lb)	Aug 2008	Sept 2008
Jan2008-Jan2007	28.98	66.55	Maximum	343	322
Sept 2008-Jan 2008	3.39	11.25	Most Frequent	328-329	300-301

Fuel surcharge decreases to 39% over the standard freight rate effective Wednesday September 10, 2008. Energy Surcharge remains Zero.

Average price in 2007: \$3.39 per pound.

Weakening demand in China. No residential housing demand in US. The spread between New Materials and the price our industry is paid for our scrap materials continues to be an issue for the shops caught between this particular economic vise...

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



Scrap Nickel is down 21% since January; down 8% since July.

<i>Interval</i>	<i>% Change</i>	<i>\$ Change</i>	<i>Commodity Price (cents/lb)</i>	<i>Aug 2008</i>	<i>Sept 2008</i>
<i>Jan2008-Jan2007</i>	-49.09	-270.00	<i>Maximum</i>	720	770
<i>Sept 2008-Jan 2008</i>	-21.43	-210.00	<i>Most Frequent</i>	720	770

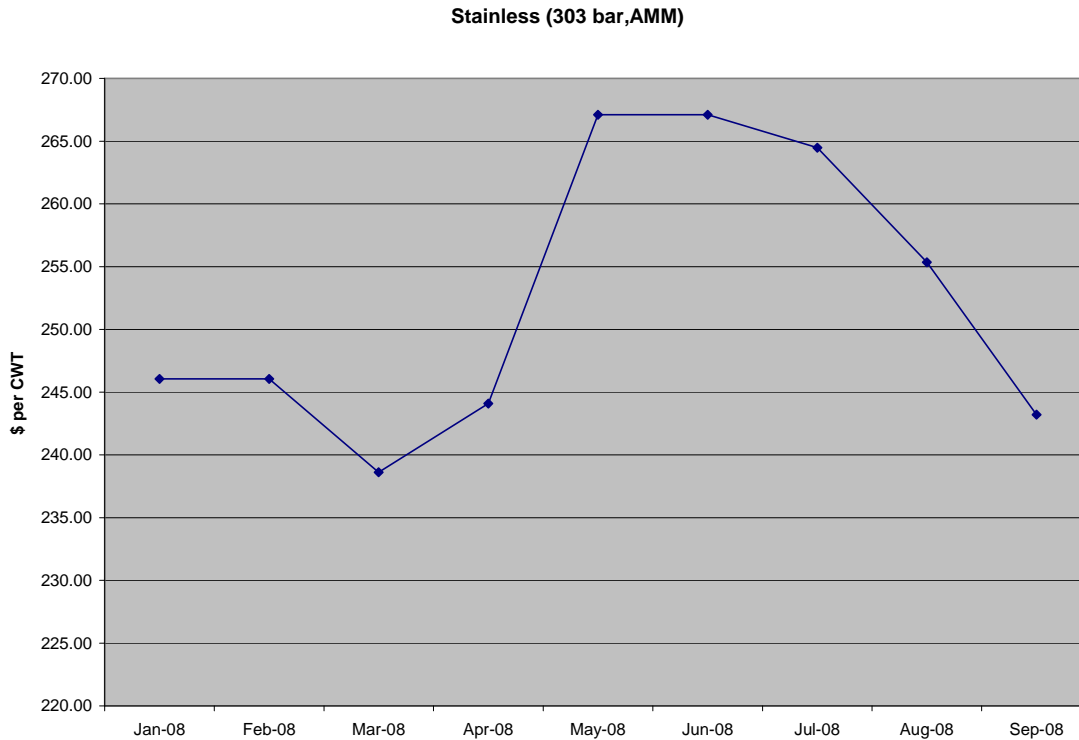
A surplus of Nickel metal availability was reported by the International Nickel Study Group for July. The world has been Nickel short for some time, and the reported surplus of metal explains the drop in price of the commodity we track.

Average price in 2007: \$12.01per pound, 38% above 2006 avg. of \$869.17.

(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- September \$1.36 last posted on website. These are calculated on a two month lag.*



We do not have a lot of confidence in this chart, but we present it for comparison to your experience in the market. Prices reported by AMM.

David Harquist comments on the impact of China in the Stainless Steel Market:

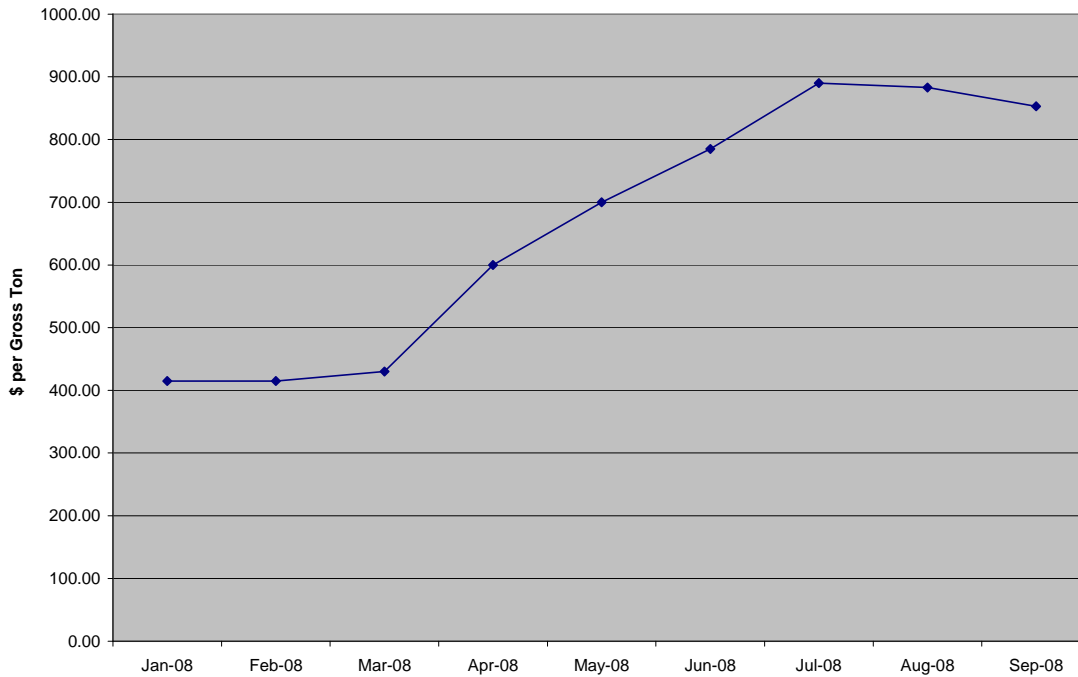
Link: <http://tinyurl.com/6fpoyd>

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

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

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

Steel Scrap (#1 Busheling)



Interval	% Change	\$ Change	Commodity Price (\$/gr.ton)	Aug 2008	Sept 2008
Jan2008-Jan2007	55.36	155.00	Maximum	883	853
Sept 2008-Jan 2008	105.54	438	Most Frequent	853	573

Surcharges: September 2008 Material Surcharges for Cold Finished Bars (per CWT): \$21.70; energy surcharge \$0.26; Fuel Surcharge \$0.19; no additional alloy surcharges applicable. Base prices increased \$2.50 per cwt effective with Shipments September1, 2008.

Reporting notice: The benchmark commodity that we follow, #1 Steel Bundles, Chicago, is no longer tracked due to changes in the way the automakers sell their stamping scrap. Effective with June 2008 data, we are reporting the AMM #1 Busheling, composite price (Chicago, Cleveland, and Pittsburgh) as our indicator for the price of steel scrap. This indicator has tracked essentially the same as #1 bundles over the last two years.

Steel #1 Busheling is up 105% since January; down 4 % since July. (Actually, using October numbers, this commodity is up 37.3% over January and down 35.9% from July.)

Last report we quoted Peter Marcus. Looks like he was right on about global steel demand, not sure he got the price falling part right. Here's what he said:

Now a word from the bull:

Financial times: "Global steel prices are set to fall steeply this year, bringing to an abrupt end a remarkable boom for the world steel industry, according to Peter Marcus, a leading industry consultant.

"Mr. Marcus said he was "overwhelmingly negative" about the outlook for steel prices in the remaining months of 2008, after a 12-month period in which prices have increased by more than 60 per cent, even in the face of a slackening global economy.

He said in a report the steel industry could be on the brink of a "supply/demand disaster" due to an upswing in global steel production coinciding with a faltering in global steel consumption, as credit problems and weak consumer and industry demand finally feed through to steel plants. Mr. Marcus, managing partner at the US consultancy in World Steel Dynamics, is one of the steel industry's most widely followed analysts."

Here's link to the full Financial Times story:

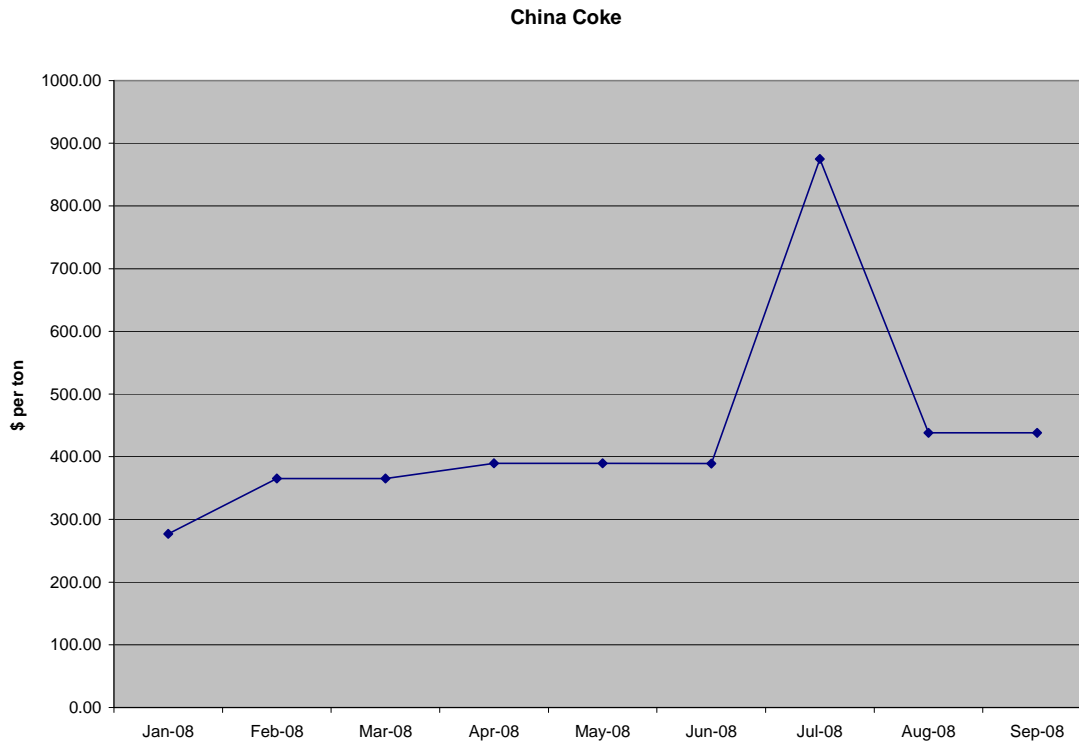
<http://www.ft.com/cms/s/0/6c2f7884-45f7-11dd-9009-0000779fd2ac.html>

Production, Shipments, Inventories

We are seeing what our favorite steel analyst, Michelle Applebaum, characterizes as "Stealth Production Cuts-North American Mills Quietly Cutting Production." She also mentions that while the operating rate is at its lowest level in years, even it is overstated.

Average price in 2007: \$319.17 per gross ton, up 8.8% over 2006 average.

Coke (Chinese) (\$ per metric tonne)



China Coke is up 58% since January; down 49.9% since July.

Average price in 2006: \$141.75 per tonne.

According to a press report at [mjunction](#), a TATA Steel / The Sail publication, the USA emerged as the largest importer of Coke from China- 1,554,400 tons Jan-July 2008 average FOB export price of \$438.04 per ton (Not clear if they mean ton or tonne in this report). Japan second at 1,322,600 tons and India, 740,300 tons.

(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

AISI has submitted written comments to the US Govt's interagency Trade Policy Staff Committee (TPSC) about China's non-compliance with the commitments it has made to the World Trade Organization (WTO). Here's a link:

<http://www.steel.org/AM/Template.cfm?Section=2008&CONTENTID=25603&TEMPLATE=/CM/ContentDisplay.cfm>

David Harquist comments on the affect of China in the Stainless Steel Market really complete analysis!

Link: <http://tinyurl.com/6fpoyd>

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

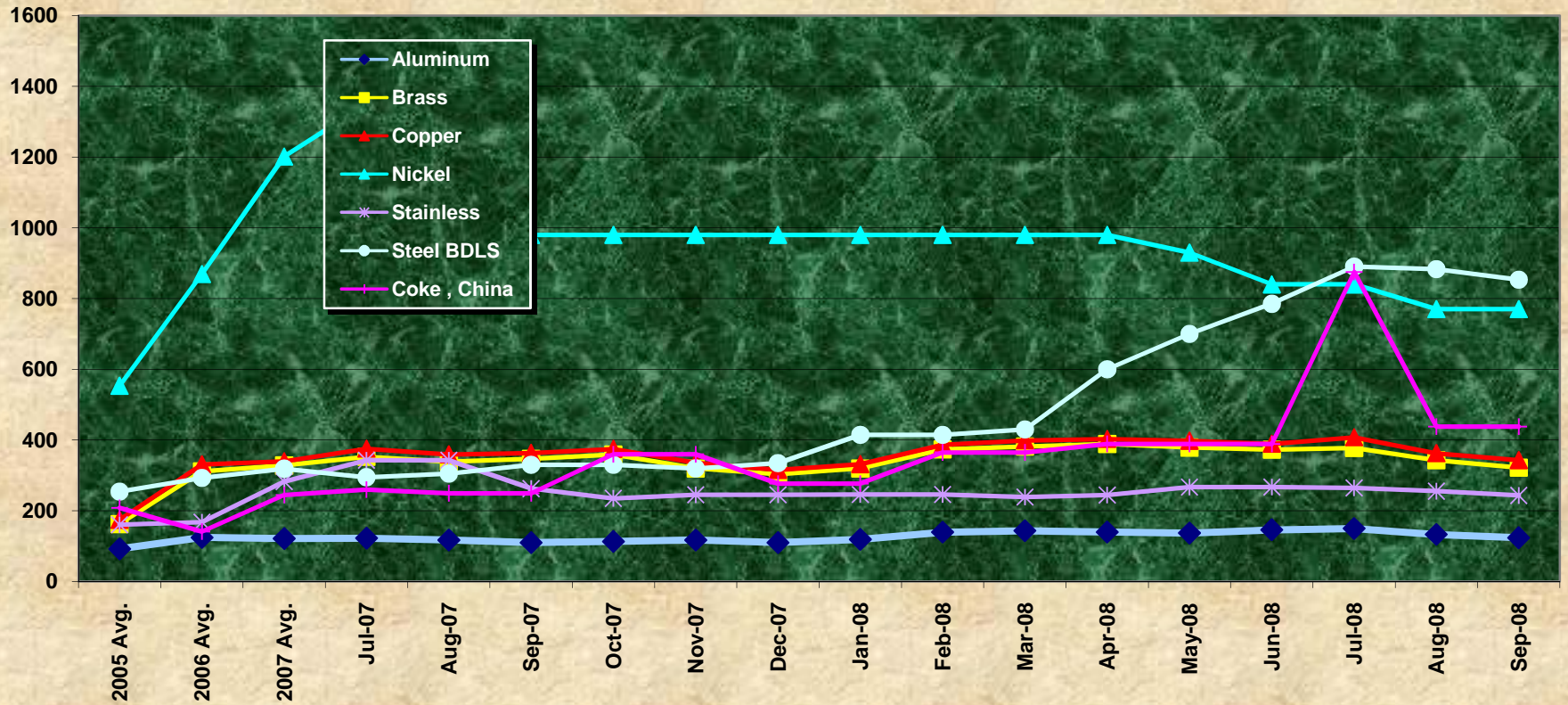
Please see the Analysis of Foreign Currencies prepared by Georgetown Economic Services posted along with this report.

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, in an election year, then when?*

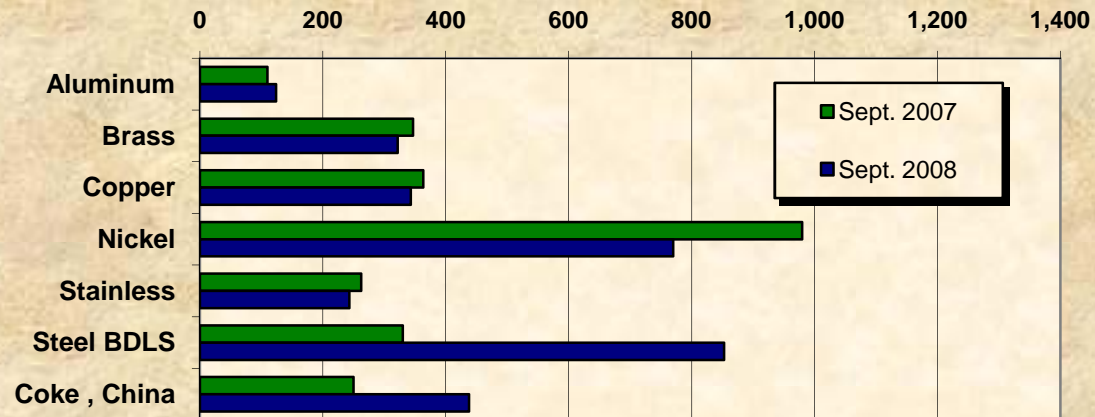
-Miles Free

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
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
2007 Avg.	121.49	328.17	339.86	1201.67	282.65	319.17	244.75
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	250.00
Sep-07	110.00	347.00	363.60	980.00	262.63	330.00	250.00
Oct-07	113.25	359.00	374.95	980.00	235.04	330.00	360.00
Nov-07	117.25	320.00	335.60	980.00	245.25	320.00	360.00
Dec-07	110.00	303.00	315.50	980.00	245.25	335.00	277.00
Jan-08	119.00	320.00	331.70	980.00	246.06	415.00	277.00
Feb-08	139.75	374.00	386.35	980.00	246.06	415.00	365.30
Mar-08	143.75	382.00	398.95	980.00	238.62	430.00	365.30
Apr-08	140.00	389.00	402.80	980.00	244.09	600.00	389.40
May-08	137.00	379.00	397.85	930.00	267.10	700.00	389.40
Jun-08	146.30	373.00	389.55	840.00	267.10	785.00	389.00
Jul-08	150.00	378.00	407.75	840.00	264.47	890.00	875.00
Aug-08	133.25	343.00	362.85	770.00	255.35	883.00	438.07
Sep-08	123.75	322.00	342.95	770.00	243.21	853.00	438.07
Jan08- Jan 07 \$Change	-9.50	54.00	66.55	-270.00	3.06	155.00	92.00
Jan08-Jan07 %Change	-7.39	20.30	25.10	-21.60	1.26	59.62	49.73
Jan08- Sept08 \$Change	4.75	2.00	11.25	-210.00	-2.85	438.00	161.07
Jan08-Sept08 %Change	3.99	0.63	3.39	-21.43	-1.16	105.54	58.15
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
2007 Average	121.49	328.17	339.86	1201.67	282.65	319.17	244.75
2008 YTD Average	136.98	362.22	380.08	896.67	252.45	663.44	436.28
YTY%Change	12.50	-7.20	-5.68	-21.43	-7.39	158.48	75.23

Table A

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

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.***

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
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

Table A Supplemental Calculations

**Quarterly Averages
PMPA Material Impacts**

	Aluminum	Brass	Copper	Nickel	Stainless	Steel BDLS	Coke , China
	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