

STEEL-INSIGHTS, LLC
Metals, Mining & Manufacturing Strategic Consulting

USA Monthly Mill Cost Report

A collection of integrated and EAF mill cost charts.

By Becky E. Hites

May 31, 2015





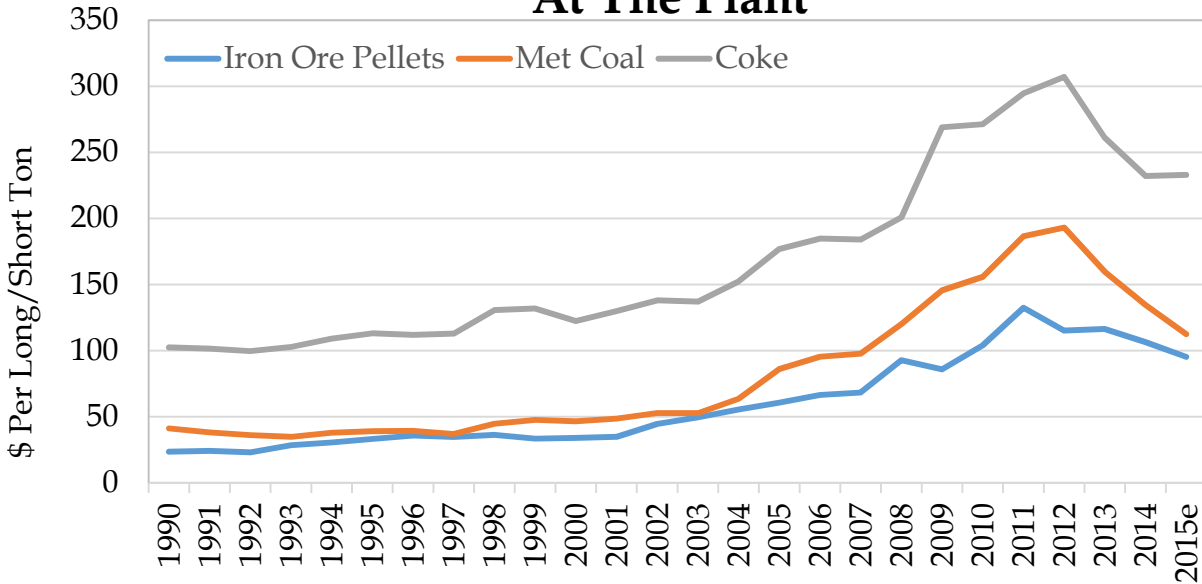
Information included in this report is believed to be true and the author has exercised due diligence in obtaining the data from market and private sources. This report is not intended to be the sole basis for making an investment and the reader is cautioned to exercise additional independent due diligence before making any investment decision.

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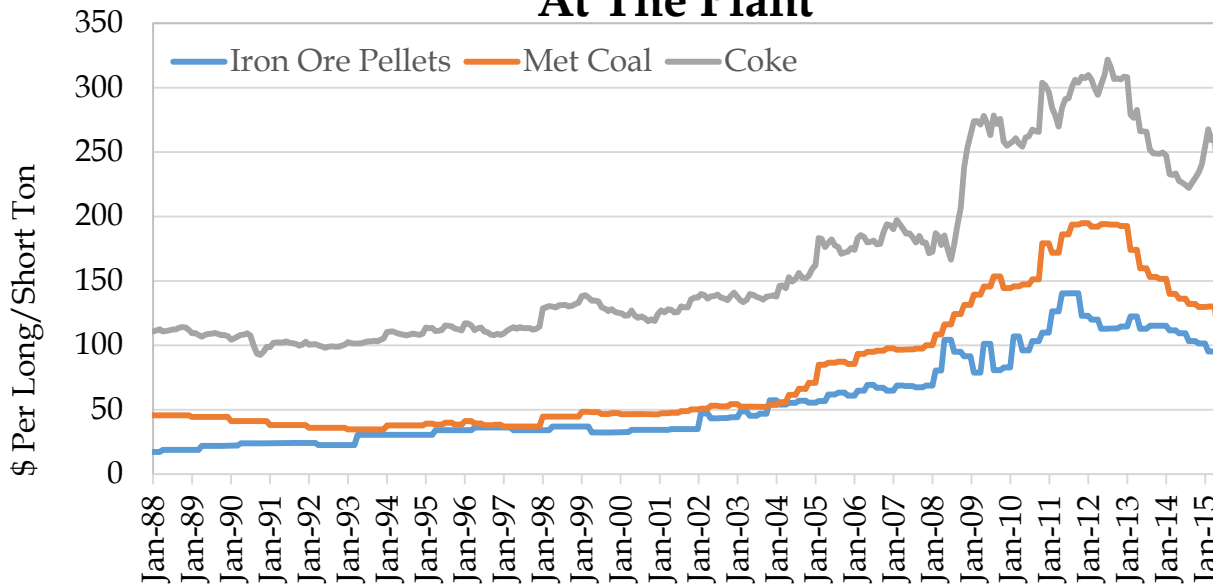
Integrated Mill Raw Material Prices

Integrated Steelmaking Raw Materials, At The Plant



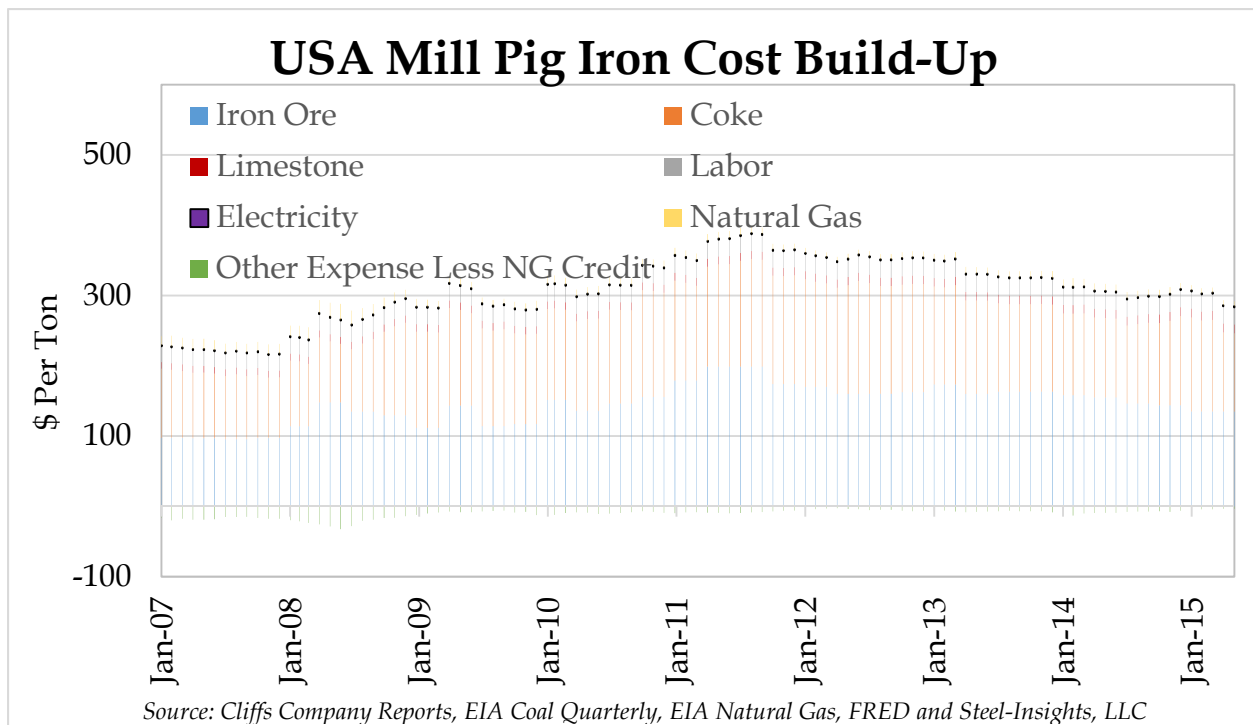
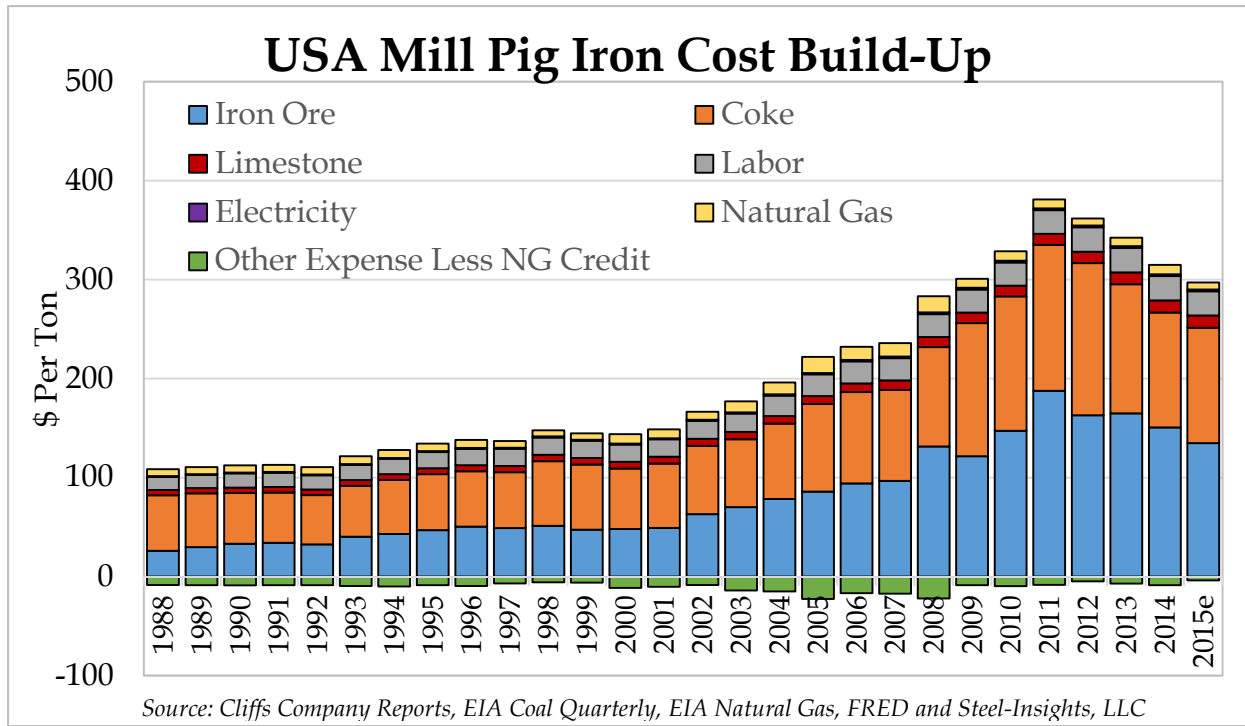
Source: Cliffs Company Reports, EIA Coal Quarterly & Steel-Insights, LLC estimates

Integrated Steelmaking Raw Materials, At The Plant

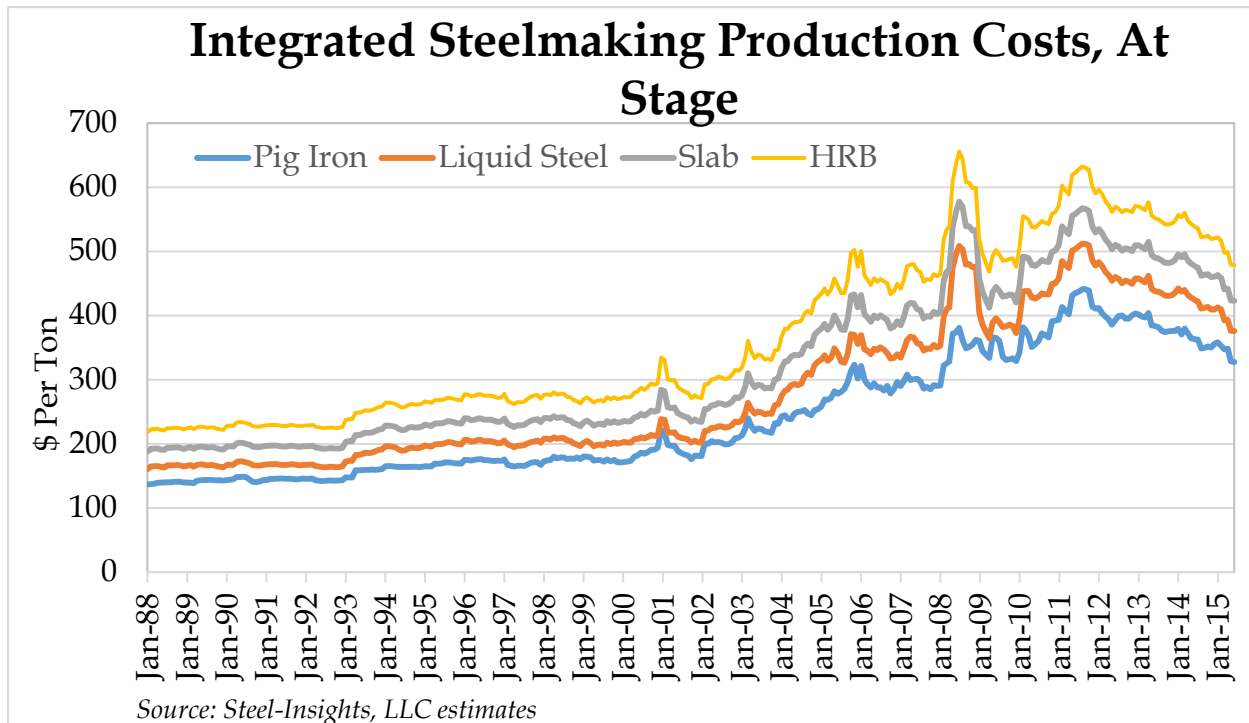
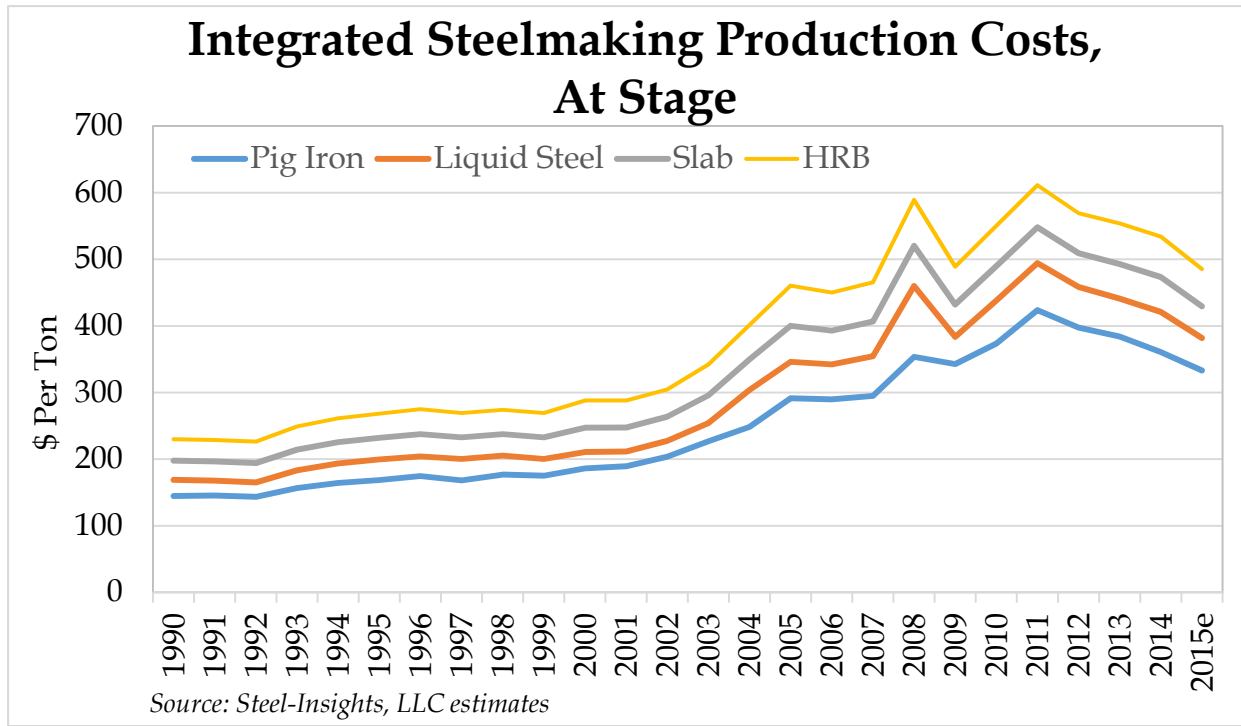


Source: Cliffs Company Reports, EIA Coal Quarterly & Steel-Insights, LLC estimates

Pig Iron Cost Break-Down

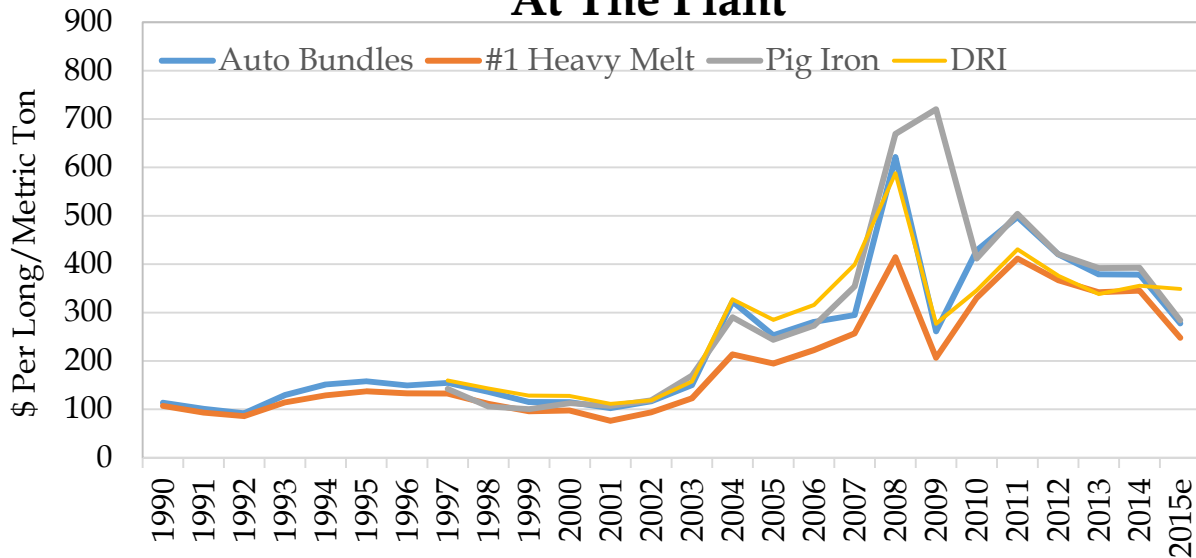


Hot-Rolled Band Production Cost, Integrated Mill



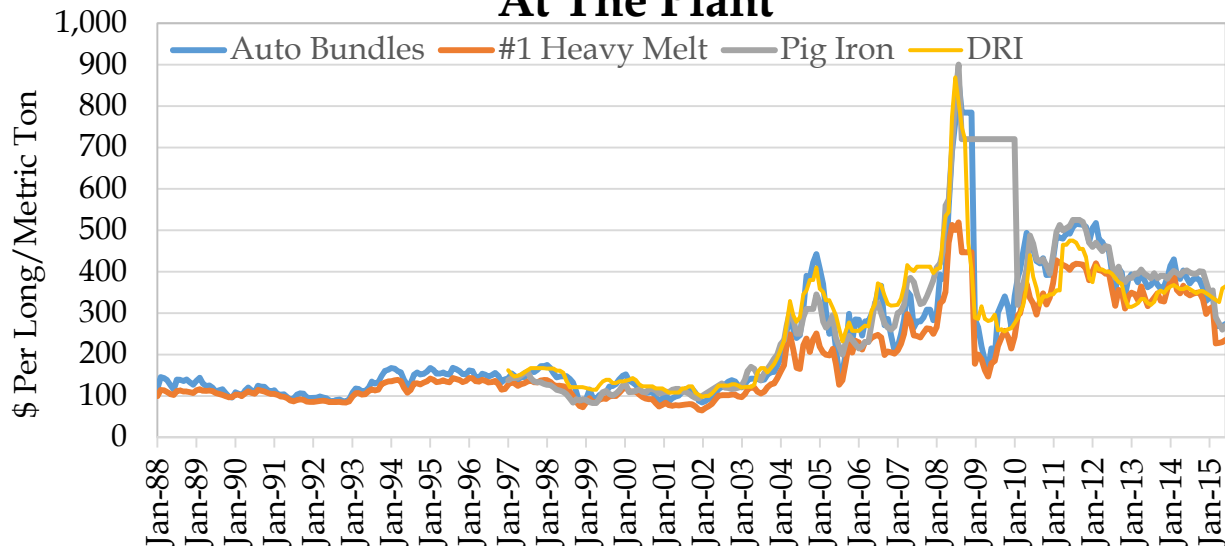
EAF Mill Raw Material Prices

EAF Steelmaking Raw Materials, At The Plant



Source: American Metal Market, World Steel Dynamics, Trading Companies & Steel-Insights, LLC estimates

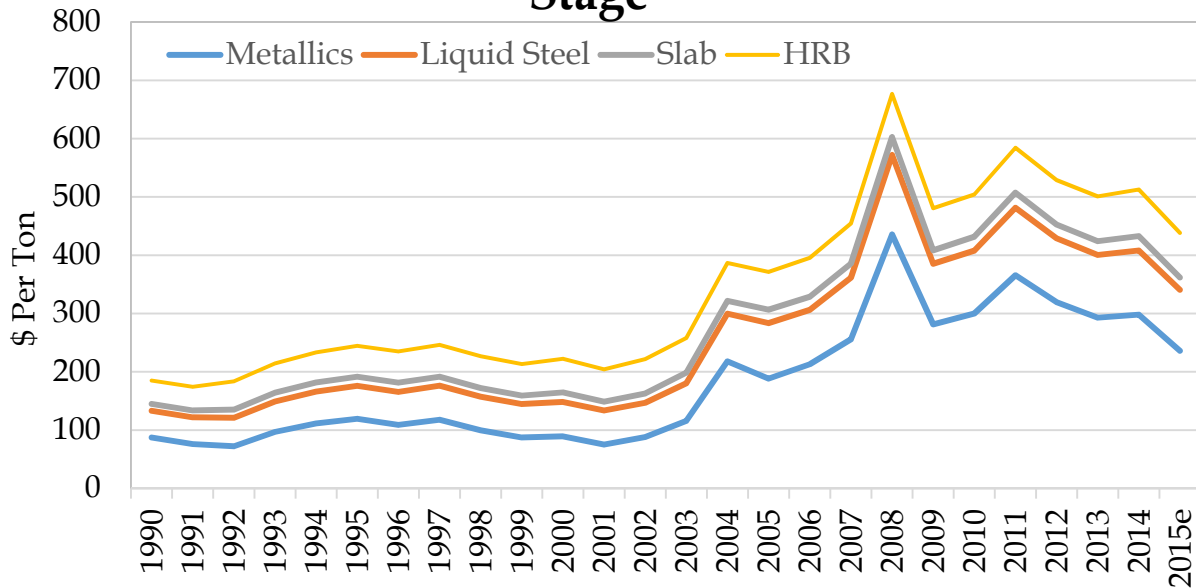
EAF Steelmaking Raw Materials, At The Plant



Source: American Metal Market, World Steel Dynamics, Trading Companies & Steel-Insights, LLC estimates

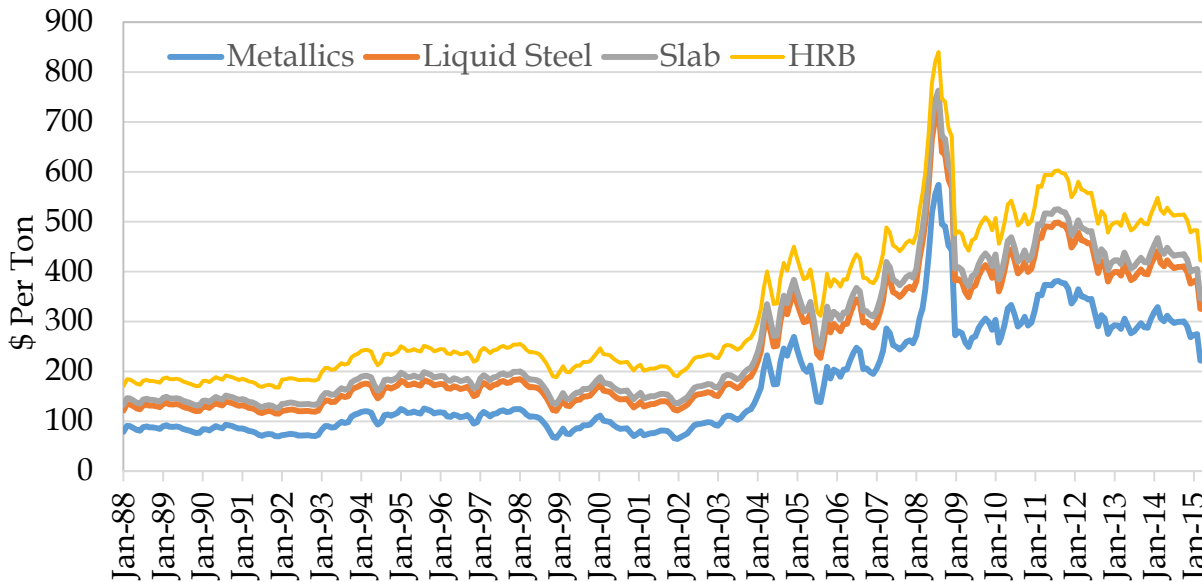
Hot-Rolled Band Production Cost, EAF Mill

EAF Steelmaking Production Costs, At Stage



Source: Steel-Insights, LLC estimates

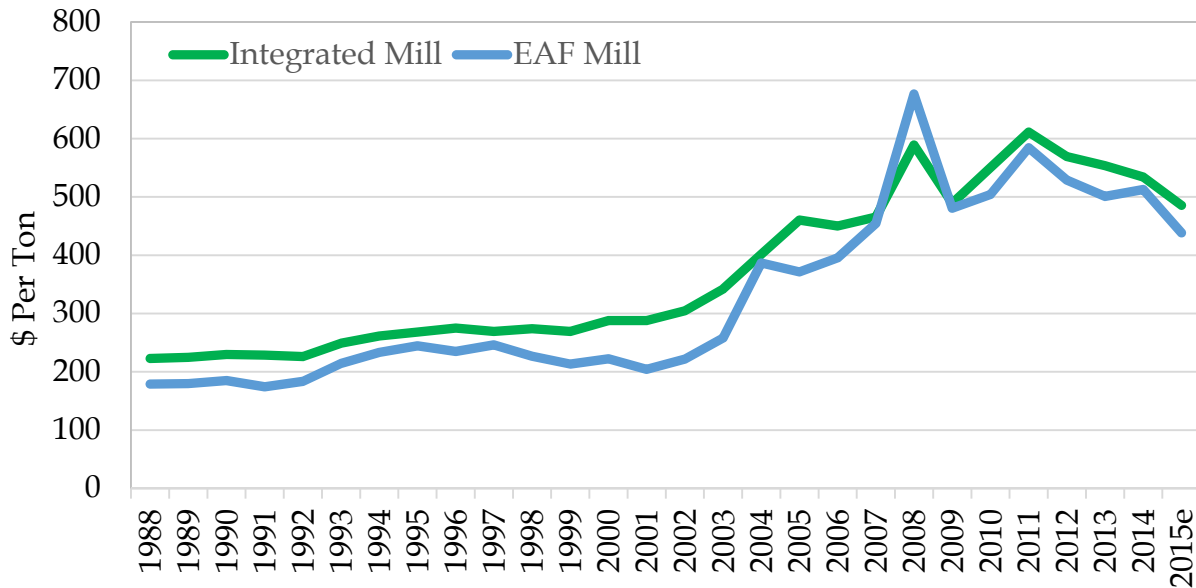
EAF Steelmaking Production Costs, At Stage



Source: Steel-Insights, LLC estimates

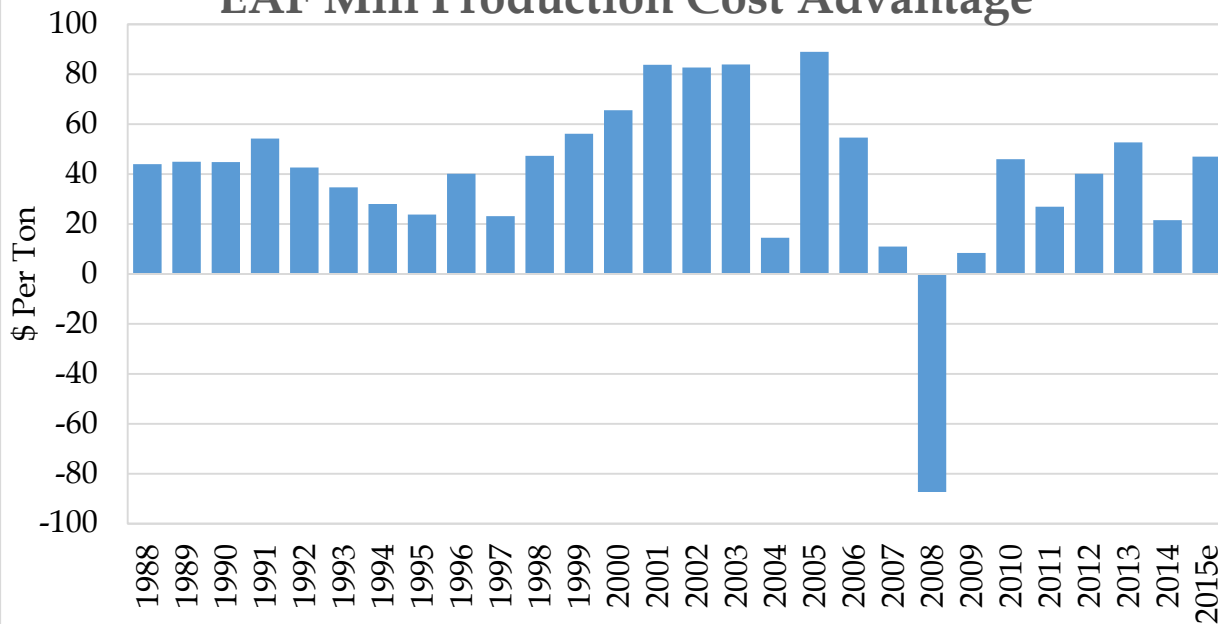
Production Cost Comparison, Integrated Versus EAF Mill

Hot-Rolled Band Production Costs



Source: Steel-Insights, LLC estimates

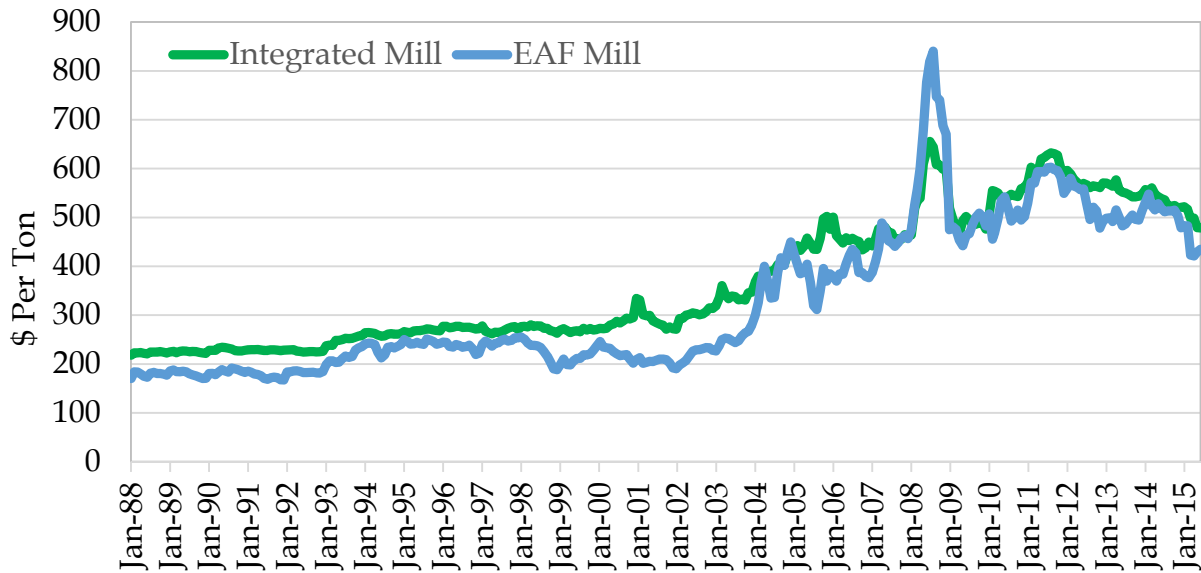
EAF Mill Production Cost Advantage



Source: Steel-Insights, LLC estimates

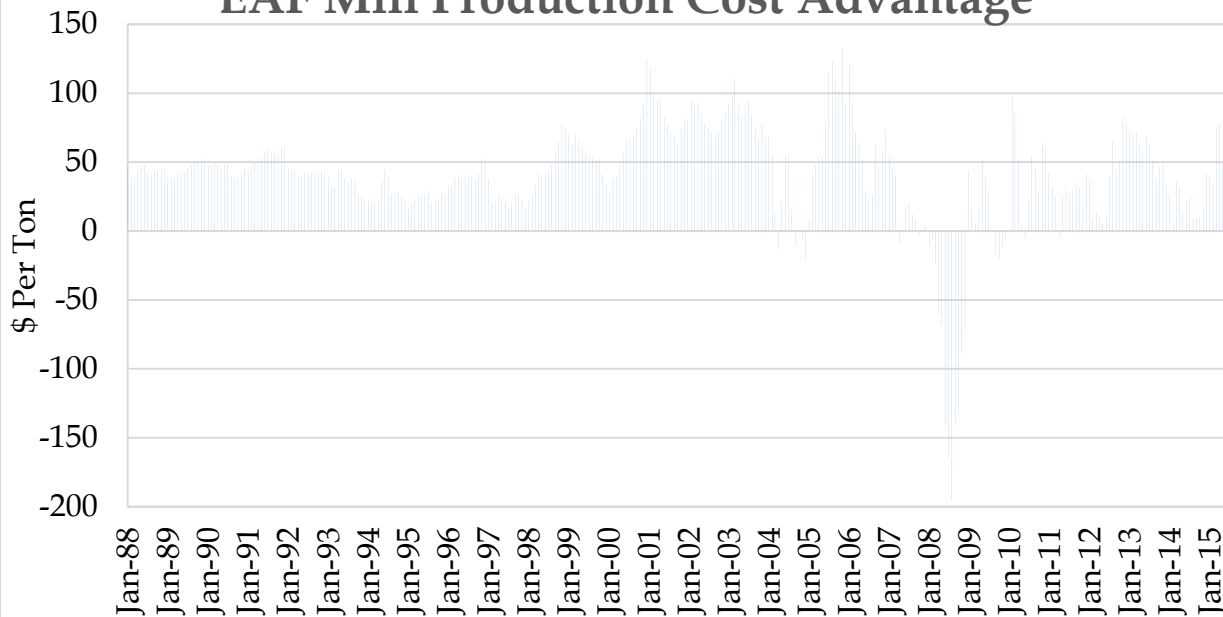
Production Cost Comparison, Integrated Versus EAF Mill

Hot-Rolled Band Production Costs



Source: Steel-Insights, LLC estimates

EAF Mill Production Cost Advantage



Source: Steel-Insights, LLC estimates

USA Integrated Cost Model Summary

USA Integrated Mill

Summary Cost Elements-\$ Per Net Ton													
	Cost of HRB	Metallics Cost	HRB Cost Above Metallics Including Yield Loss	Metallics Including Yield Loss	Cost Above Metallics	Iron Ore Cost, Gross Tons	Coal Cost, Short Tons	Coke Cost, Net Tons	Pig Iron Cost, Net Tons	Energy Cost, Net Ton	Labor Cost, Net Ton	Other Material Costs, Net Ton	M-H/T
1988	223	130	93	156	67	18	46	112	139	19	29	19	1.72
1989	225	130	95	156	68	21	44	108	142	20	29	19	1.70
1990	230	132	98	158	72	23	41	102	145	20	32	20	1.69
1991	229	130	98	156	72	24	38	101	145	21	31	20	1.67
1992	226	128	99	153	73	23	36	100	143	21	31	21	1.65
1993	249	143	106	172	77	28	35	103	157	22	34	21	1.64
1994	261	152	109	183	79	30	38	109	164	23	34	22	1.62
1995	268	157	112	188	80	33	39	113	169	22	36	23	1.60
1996	275	160	115	192	83	36	39	112	175	23	36	23	1.59
1997	269	156	114	187	82	35	37	113	168	20	38	24	1.57
1998	274	160	114	192	82	36	45	131	177	19	38	24	1.56
1999	269	156	114	187	82	33	48	132	175	20	38	24	1.54
2000	288	165	123	198	90	34	46	122	186	27	38	25	1.52
2001	288	165	123	198	90	35	49	130	189	26	38	26	1.51
2002	305	179	126	215	90	45	53	138	204	24	39	26	1.49
2003	342	202	140	242	100	50	53	137	227	32	41	28	1.48
2004	401	241	161	289	112	55	64	152	248	34	45	34	1.46
2005	460	267	194	320	140	61	86	177	291	44	48	48	1.45
2006	450	269	181	324	126	66	95	185	290	38	49	40	1.44
2007	466	276	189	332	134	68	98	184	295	39	49	45	1.42
2008	589	364	226	437	152	93	120	201	353	47	51	55	1.41
2009	489	309	180	372	118	86	146	269	343	30	51	37	1.39
2010	550	356	194	428	123	104	156	271	373	31	51	40	1.38
2011	611	406	205	488	123	132	187	295	424	30	52	41	1.37
2012	569	376	193	451	118	115	193	307	398	26	54	38	1.35
2013	554	360	194	432	122	116	160	261	384	29	54	39	1.34
2014	534	341	193	409	125	106	134	232	361	31	54	40	1.32
2015e	485	305	181	366	119	95	112	233	333	25	53	41	1.31
Dec-14	522	333	189	400	122	101	130	254	358	28	54	40	1.32
May-15	479	299	179	360	119	95	106	223	328	25	53	41	1.31

Source: Steel-Insights, LLC analysis

USA EAF-Based Mini-Mill Cost Model Summary

USA EAF-Based Mini-Mill Cost Model

Summary Cost Elements-\$ Per Net Ton

	HRB Cost Above Metallics Including Yield Loss			Metallics Including Yield Loss		Auto Bundles, Gross Tons		Pig Iron, HBI/DRI, Metric Tons, Gross Tons, Delivered		Energy Cost	Labor Cost	Other Material Costs	M-H/T
	Cost of HRB	Metallics Cost	Yield Loss	Cost Above Metallics		Gross Tons	#1 HM, Gross Tons	Tons, Delivered	Tons, Delivered				
1988	179			98	81					17	15	49	0.81
1989	180			97	83					17	15	51	0.80
1990	185			99	86	114	107			18	15	52	0.79
1991	174	76	99	87	88	101	93			19	16	54	0.79
1992	184	72	111	82	101	92	86			19	25	57	0.78
1993	214	97	117	111	104	130	114			20	25	59	0.77
1994	233	112	122	127	106	151	129			21	25	60	0.76
1995	244	120	125	136	108	158	137			21	25	62	0.75
1996	235	109	126	124	111	149	133			22	26	63	0.75
1997	246	118	128	134	112	155	132	142	160	22	26	65	0.74
1998	227	100	127	114	113	136	111	106	143	21	25	67	0.73
1999	213	87	126	99	114	115	96	100	128	23	24	67	0.73
2000	222	89	133	102	121	115	97	113	128	24	26	70	0.72
2001	204	75	129	86	118	102	76	107	111	25	23	71	0.71
2002	222	88	134	101	121	117	94	119	119	23	26	73	0.70
2003	258	116	142	132	126	150	122	170	157	27	24	75	0.70
2004	387	218	169	248	138	323	214	290	327	29	26	84	0.69
2005	371	188	183	215	157	253	195	244	285	34	24	99	0.68
2006	396	213	183	243	153	281	223	273	316	34	25	94	0.68
2007	455	256	199	292	163	295	257	354	399	37	24	102	0.67
2008	676	436	241	496	180	621	414	669	588	41	23	116	0.66
2009	481	281	199	321	160	261	207	720	277	38	25	97	0.99
2010	504	300	204	342	162	429	330	412	346	38	24	101	0.84
2011	584	366	219	417	168	498	412	504	430	38	26	104	0.72
2012	529	320	209	364	165	421	367	421	376	38	25	102	0.71
2013	501	293	208	334	167	379	342	392	338	39	24	104	0.70
2014	513	298	215	340	173	378	345	392	356	40	26	107	0.70
2015e	438	236	202	269	170	278	248	284	349	39	22	109	0.69
Dec-14	483	273	210	311	172	337	310	350	343	44	26	102	0.70
May-15	435	233	202	265	169	274	235	270	365	43	22	104	0.69

Source: Steel-Insights, LLC analysis

Steel-Insights, LLC – “Seeing” What Others Don’t – Identifying & Harnessing Resources for Success

In WWII, American submarine commanders endured despite being outclassed by superior equipment and outgunned (fully functioning torpedoes weren’t available to them for the first 21 months of the Pacific War). In the fog of war, as often is the case in business, decisions with long impacting outcomes have to be made without the luxury of complete or definitive information.

Steel-Insights was formed to assist executive management teams navigate the “noise of battle” by more effectively managing the abundant resources available today and harnessing those resources to explore thought provoking and penetrating issues in order to magnify the pivotal decisions required for the long-term success of their companies in arguably tough industries that must survive challenging cycles, i.e. training and empowering submarine commanders.

