

Ask WORLD STEEL DYNAMICS

World Steel Dynamics (WSD) is a leading steel information service in Englewood Cliffs, N.J. WSD's steel experience, steel database and availability of steel statistics are the principles for performing steel forecasts, studies and analysis for international clients. WSD seeks to understand how the "pricing power" of steel companies the world over will be impacted by changes in the steel industry's structure. To submit your questions for WSD, e-mail WSD@aist.org.



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Q: Will Chinese steel be a long-term destabilizing force to the global industry?

A: In WSD's opinion, the answer to the question above is "no." We view the Chinese steel industry export threat as a temporary, but curable, migraine headache for competitors outside of China.

For sure, there has been a dramatic deterioration in the Chinese steel industry's supply/demand balance in just the past 18 months. The industry is now in a period of substantial overcapacity. Specifically:

- In May 2005, China's annualized crude steel output was 351 million metric tons, and the country was a net importer of steel products at an annual rate of 5 million metric tons. *Note: it takes 1.1 metric tons of crude steel to make a one-ton steel product.*
- In December 2006, China's annualized production had surged to 460 million metric tons, and the country was a net exporter of steel products at an annual rate of 54 million metric tons.

To make matters even worse, the Chinese steel industry spent \$28 billion in 2005 expanding its capacity, an estimated \$26 billion in 2006 and is expected to spend an additional \$23 billion in 2007. Moreover, in non-Chinese terms, these annual capital outlays are equivalent to about \$40-50 billion of expenditures when taking into account the approximately 50-percent lower cost to build steel mills in China. Steelmaking capacity in China is rising at a rate of about 40-50 million metric tons per annum.

Another concern for non-Chinese steelmakers is that the world export price and the price of steel in most home markets has been far above that in China, although not as much in the past few months. The ex-works price of hot rolled band in China in mid-January 2006 was about \$423 per metric ton (up about \$25 per metric ton in a month). This price compares to the U.S. figure of \$578 per metric ton, ex-works, and the world export price of \$503 per metric ton, FOB the port of export (according to the *SteelBenchmark*TM prices released Jan. 10, 2007).

The most important sector in the Chinese steel industry, from the viewpoint of major mill competitors elsewhere, is the one that produces wide hot rolled band and related downstream products. Here are some facts:

- There is not much obsolete wide steel sheet capacity in China because so much of it is new.
- Steel sheet demand in China has been among the fastest growing among that for all steel products.
- Except for Shagang, which has ambitions to become a 20 million metric ton producer, all the major steel sheet mills are owned by either the central or provincial governments.
- There is great rivalry among the major Chinese mills.

- The leading Chinese steel companies are "production machines." Maximizing output faster than the competition has often been the key to success.
- There are far fewer producers of hot rolled band (about 33) than producers of other products. For example, there may be more than 500 producers of merchant bar, rebar and wire rod.
- Most of the major Chinese steel companies are still engaged in huge capital spending programs.
- Only a few of the companies have their own iron ore mines (Angang, Baotou Steel, Capital Steel Panzhihua and Taiyuan Steel).
- Most mid-sized and larger steel companies in China provide huge financial support to the local municipalities in which they are located. They often have the same name as the city.
- Dealers and traders distribute about two-thirds of the steel that is shipped by China's major steel mills. (Note: There may be more than 50,000 steel traders in China.)
- Chinese steel mills' production costs are up substantially in the past three years, since the price of steelmakers' raw materials in China is no longer cheap.
- Almost no wide hot rolled band is produced via the EAF steelmaking route. Electric arc steelmakers in China account for only about 14 percent of the steel industry's output because of high prices for steel scrap and electric power. Many small steelmakers have opted to build mini blast furnaces and small-sized BOF shops. They buy their coke from independent cokemakers.
- Merger and acquisition activity is just starting to heat up. The government, at present, will not permit a foreign firm to own more than 50 percent of a good-sized steel company. *Note: We expect this to change in a few years.*
- Top management of most steel companies tends to be selected, and/or approved, by provincial and central governmental authorities.
- The steel mills' balance sheets have improved in the past few years, in many cases due to far higher profits.
- Five of China's top steel companies, along with the Chinese Iron & Steel Association (CISA), have joined the International Iron & Steel Institute (IISI).
- Government officials are concerned about the pollution that the steel industry is creating. Chinese steel companies in most cases face major outlays to pare air and water pollution.
- It is believed that the massive growth of the steel industry has "crowded out" other industries that want to make use of ports, railroads, water, electricity and roads.

- Chinese steel companies are racing to boost product quality in order to replace the higher-value-added sheet steels steel coming in from abroad – still in a sizable quantity (especially from the major mills in the Pacific Basin).
- The Chinese steel mills' exports have been rising rapidly. In December 2006, total exports of steel products from China amounted to 6.0 million metric tons versus 2.7 million metric tons per month in May 2005. Of this 6.0 million total, exports of sheet products were about 2.6 million metric tons; however, this latter amount was offset with imports of about 1.3 million metric tons.

Given this information, should one conclude that the “game is over” for the non-Chinese steel industry? Is it only a matter of time before the Chinese steel industry brings down all others? WSD will answer these questions in the April 2007 issue of *Iron & Steel Technology*.

Peter Marcus, managing partner
World Steel Dynamics



China's Imports by Product (in thousand metric tons)

	Ingots & Semis		Bars & W.R.		Shapes		Sheets & Plates		Pipes		Others		Total	
		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg
2003	5,935	29	1,240	19	860	258	33,260	57	1,130	-18	625	-8	43,050	48
2004	3,860	-35	1,380	11	810	-6	25,060	-25	1,320	17	660	6	33,090	-23
2005	1,353	-65	1,080	-22	650	-20	22,470	-10	1,080	-18	537	-19	27,170	-18
May 05	134	-61	90	0	60	0	1,870	4	80	-38	56	18	2,290	-7
Dec 06E	17	-76	100	11	30	-40	1,263	-18	80	-20	40	-16	1,530	-19

China's Exports by Product (in thousand metric tons)

	Ingots & Semis		Bars & W.R.		Shapes		Sheets & Plates		Pipes		Others		Total	
		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg
2003	1,491	12	2,400	66	244	-34	1,820	2	1,133	63	1,312	14	8,400	24
2004	6,155	313	4,460	86	472	93	5,780	218	1,683	49	1,730	32	20,280	141
2005	7,236	18	6,090	37	830	76	8,460	46	3,050	81	1,934	12	27,600	36
May 05	604	75	570	33	84	92	990	281	290	98	172	38	2,710	101
Dec 06E	500	-8	1,530	159	360	251	2,560	313	780	179	320	49	6,050	157

China's Net Imports by Product (in thousand metric tons)

	Ingots & Semis		Bars & W.R.		Shapes		Sheets & Plates		Pipes		Others		Total	
		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg		%Chg
2003	4,444	36	-1,160	183	616	-574	31,440	62	-3	-100	-687	45	34,650	55
2004	-2,295	-152	-3,080	166	338	-45	19,280	-39	-363	12,076	-1,070	56	12,810	-63
2005	-5,883	156	-5,010	63	-180	-153	14,010	-27	-1,970	443	-1,397	31	-430	-103
May 05	-470	-47,059	-480	41	-24	-247	880	-43	-210	1,185	-116	51	-420	-138
Dec 06E	-483	3	-1,430	186	-330	528	-1,297	-241	-700	-289	-280	67	-4,520	904

Note: %Chg is an annual reference to the prior period, i.e., May 2005 versus May 2004 and Dec. 2006 versus Dec. 2005.

Do you have a question for World Steel Dynamics? Submit it today to WSD@aist.org.