

BHP Billiton Carbon Steel Materials Group

*A diversified resource base for China's Steel
Industry*

Julius Matthys
Vice President Marketing Iron Ore and Boodarie Iron
BHP Billiton Marketing Asia, Pty, Ltd, Singapore

3rd China International Steel and Raw Materials Conference 2003

Nov. 3rd to 5th

BHP Billiton Carbon Steel Materials Group –

A diversified resource base for China's Steel Industry

Introduction

BHP Billiton's Carbon Steel Materials Group is the world's premier supplier of steelmaking raw materials based on a long life, high quality resource base. Following the merger and adoption of a new marketing model, CSM is well placed to respond to the challenges brought on by a more positive steel outlook driven by China.

Measures adopted to meet the challenges include *Operating Excellence*; *customer focused marketing* via strengthened regional franchises, enhanced technical marketing and services, and upgraded commercial systems; and *sustainable growth*, especially in terms of flexible supply, aligned with market demand.

China has had a major impact on the seaborne iron ore and coke markets. While the iron ore industry has demonstrated to date the capability to meet the challenge posed by China's demand, the market is acutely tight and all suppliers are expanding capacity in anticipation of continued growth.

1. Introduction to Carbon Steel Materials

The Carbon Steel Materials Customer Sector Group was formed following the merger in mid 2001 of BHP and Billiton. It comprises the Iron Ore, including Boodarie Iron, and Coal groups from BHP and the Manganese group from Billiton. The formation, almost 2 years ago, saw the creation of the largest steelmaking raw materials group in the world, with sales of US\$4.36 billion to over 260 regular customers in all continents of the world and significant market positions in metallurgical coal, iron ore, and manganese ore and ferroalloys.

The CSM group is truly global in its markets but is based on the vast iron ore reserves of the Pilbara in Western Australia, the premium Australian metallurgical coal assets of the Bowen Basin in Queensland and the Illawarra Coal operations in New South Wales, and high quality manganese ore deposits at Groote Eylandt in the Northern Territory. Add to these the low phosphorus manganese ore reserves in South Africa, and associated ferroalloy smelters with additional smelting capacity in Tasmania, and a share of the Samarco pelletising operation in Brazil, and it is not hard to see how well placed the group is to supply almost the complete set of steelmakers' raw materials needs. Locations of the CSM operations are shown in Figure 1.

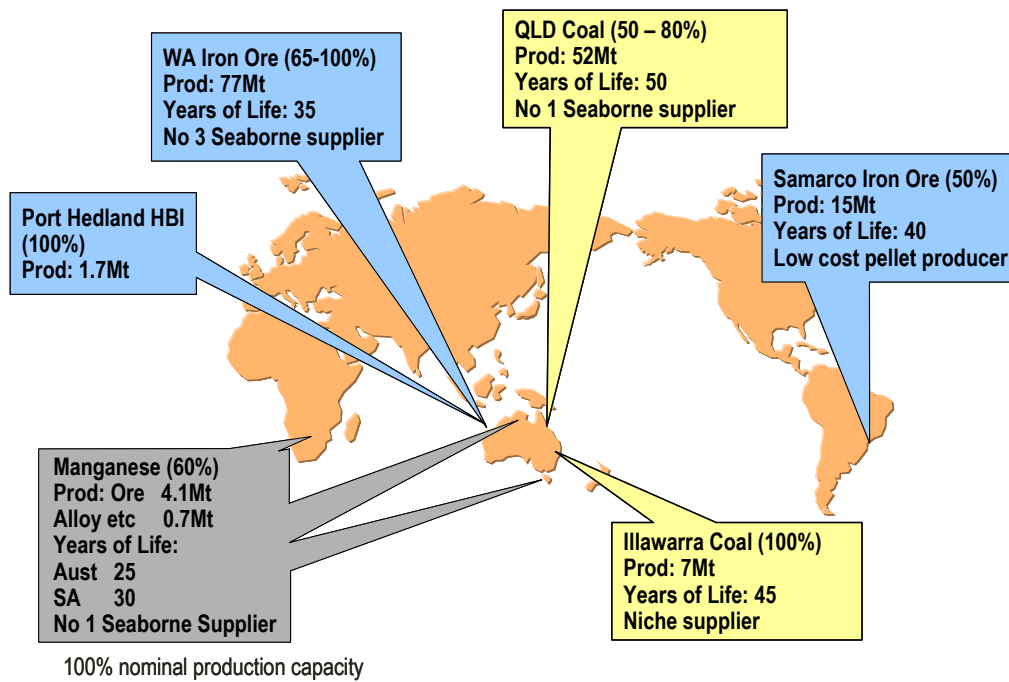


Figure 1. Global Asset Distributions for CSM

All of CSM’s assets have long reserve lives, as illustrated in Table 1. Thus the ability to maintain and meet future needs can be facilitated. Coupled to long lives are qualities that are in high demand for current and future iron and steelmaking operations. Pilbara iron ores, typified by the Mount Whaleback deposit have a large proportion of high quality lump ores that are in strong demand among leading Japanese and Korean steelmakers, and pisolite ores have rapidly proven themselves as excellent sintering ores. Bowen Basin coals with high Coke Strength after Reaction (CSR) and low oven wall pressure are in high demand with high performance European and Brazilian steelmakers, low volatile PCI coals from the same region are fast becoming the coal of choice for injection, due to high carbon content and coke replacement ratios. Low phosphorus manganese ores are also in demand as steelmakers seek lower phosphorus loading in liquid steel and as high grade blending ores which allow higher levels of domestic ore to be used, for example in China.

Table 1. Reserves and Asset Life in Years

	Total Reserves	Estimated life (years)
Bowen Basin	>2,460MT	>50 years
Illawarra Coal	>340Mt	>45 years
WA Iron ore	>2,386Mt	>35 years
Gyroote Eylandt	>85Mt	>25 years
South Africa Mn Ore	>55Mt	>30 years

A further major change following the formation of the CSM group was the establishment of a new marketing model based around two global marketing hubs, one in Europe and one in Asia. This saw the establishment of a major new Marketing office in Singapore and the co-location of Coal, Iron ore and Manganese marketing teams from Brisbane, Perth and Den Haag. Further changes were made to the Regional Office structure, with European marketing centralized in Den Haag and a major expansion of our Shanghai marketing office, which will be discussed further in the section on China. The location of major CSM marketing offices is shown in Figure 2. Total marketing personnel is 149 with the largest group in the main office in Singapore.

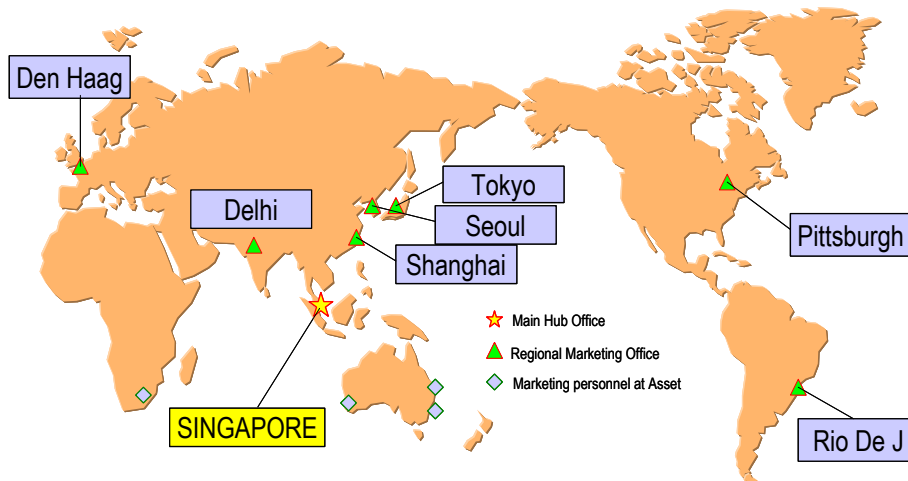


Figure 2. Distribution of CSM Marketing Offices

The bringing together of the various marketing teams in Singapore has facilitated improved cross fertilisation of ideas and improved information sharing. It has enabled us to leverage off expertise in one group, for example the understanding of China contained in Iron Ore marketing, and transfer this knowledge to other teams (coal and manganese) to better identify market opportunities for the group.

In addition to a new Marketing structure, new commercial systems were adopted. These systems, when fully implemented, will significantly enhance our capability to monitor our business and the supply chain more rapidly, and in greater detail than ever before.

Supply Chain Management

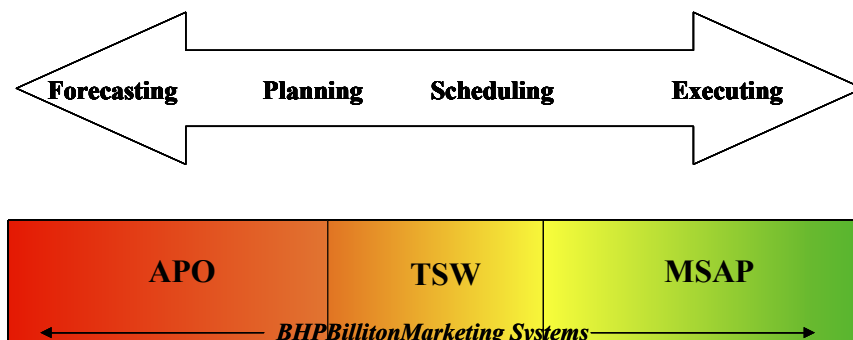


Figure 3. Improved Delivery systems and Monitoring

2. Business Environment

The global steel industry has experienced a number of “highs” and “lows” in the past few years. From record high production to record low steel prices, the past 2 years has seen appreciable changes. One factor that has been common throughout is that the industry has consistently been able to challenge the market view! How many predicted the very strong increase in production seen in 2002, or the tremendous growth in China over the past 2 years? Who predicted that steel prices would rebound so strongly, or the effect of the US trade Section 201 might actually result in a re-birth of a competitive US steel industry?

The business environment that CSM operates in is favourable – yet challenging. Demand for steel is growing more strongly than forecast a few years ago and despite uncertainties

such as the conflict in Iraq and more recently SARS, is predicted to continue growing at around 2-3%pa. The fundamental driver for this is continued economic growth due to the development of infrastructure and continued consumer demand. Today global average steel consumption is around 133kg/capita (finished steel basis), with typical developed economies at around 450kg/capita. Over 1/3 of the world's population has a consumption of <30kg/capita, a figure that has not increased in the past decade. Clearly there is very significant growth potential for steel consumption and production.

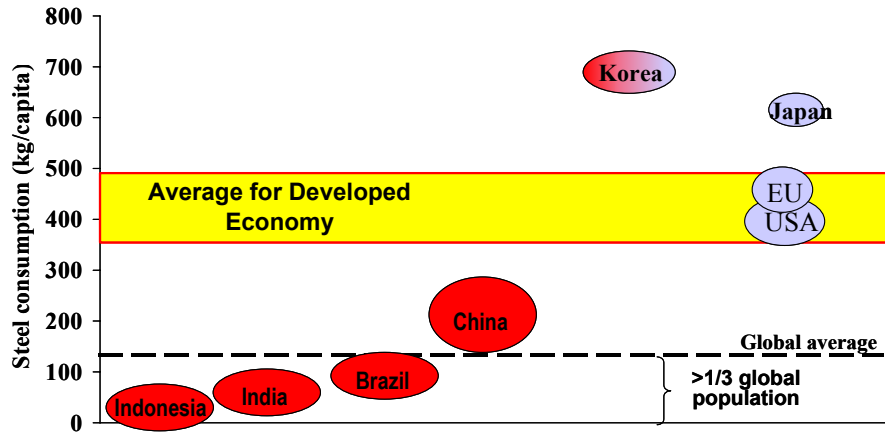


Figure 4. Global steel consumption per capita (kg crude steel)

The global steel industry despite this strong demand driver has generally been too fragmented to maximize profitability and achieve acceptable returns on capital. Selective over-capacity and production issues have been some of the causes of poor financial performance. Recent consolidations, Figure 5, have lifted the concentration of the industry and ongoing developments in the US, Europe, China and Brazil will raise the market share of the major companies still further. Improved economics seen recently with the removal of legacy costs in the US and improved market dynamics seen in Europe both bode well for the future of the industry. Naturally as major suppliers we want to see profitable customers.

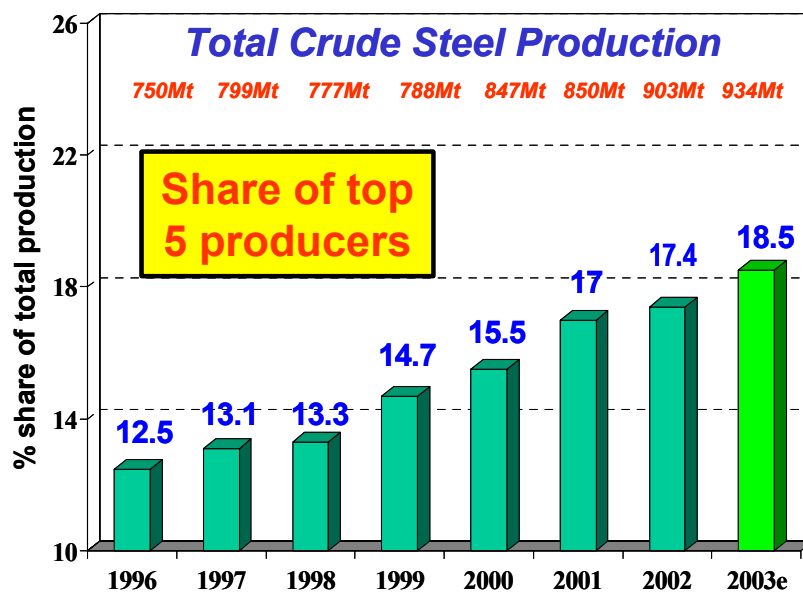


Figure 5. Global steel consolidation

3. CSM Business and Market Strategy

To compete successfully in this rapidly changing environment CSM has developed a strategy, which emphasizes:-

- **Operating Excellence,**
- **Customer Focused Marketing, and**
- **Growing Sustainably**

There is insufficient time to go through all these in depth, so I will give a brief summary of some of the key initiatives, including further details on the Marketing initiatives currently underway in the Customer Focused Marketing program.

3.1 Operating Excellence

It is imperative that as a major mine operator we seek to manage and run our operations as safely, efficiently and at as low a cost as possible. Hence, a series of major programs has been implemented to reduce LTI's and target a fatality free environment, seek continued operational synergies, reduce cost and to use technology to support "Operating Excellence" initiatives. As part of achieving the culture changes needed, 66 full and part-time coaches have been appointed to drive these changes throughout Carbon Steel Materials. These key people will act as focal points in assisting larger project related teams.

3.2 Customer Focused Marketing

A key component of the CSM strategy is to increase Marketing performance with customer focused marketing at the center. There are a number of component steps which are briefly outlined below. At the center is the belief that we need to upgrade our understanding of our customers, their needs, wants and wishes and seek to meet those in a more effective and efficient manner along the "win-win" philosophy.

3.2.1 Strengthen Regional Franchises

CSM Marketing has over time been able to build a series of strong regional franchises, Figure 6, due to our high quality product and service offer. However, it is important not to rest on one's laurels and improvements are planned and currently underway. These include initiatives to build and strengthen our Regional marketing offices, particularly here in Shanghai, and to further enhance our understanding and relationships with our global steel customers. The Shanghai office has recently been significantly enhanced with the appointment of new technical marketing team and market development expertise. In addition with the formation of the combined CSM group, significant efforts are being dedicated toward leveraging synergies from the different component groups.

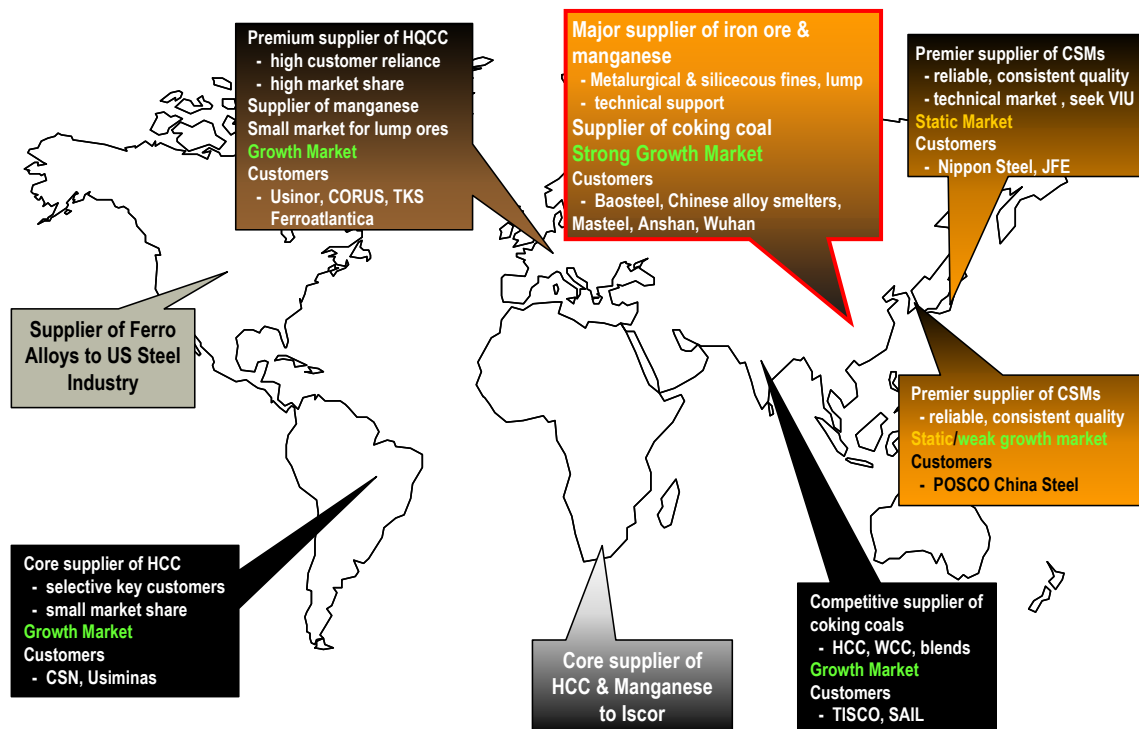


Figure 6. Regional Franchises

3.2.2 Develop Tailored Offerings

This is an area where we are actively seeking to expand. The concept is to seek to provide customer specific offerings that meet key needs of that customer. Using the product range and services that CSM can offer allows numerous opportunities for designing customer specific offers based on win-win outcomes. Examples are where specific blends have been tailored for key customers based on local requirements, such as chemistry, limited stockyard space etc. Opportunities also exist to provide a range of technical support services as part of specific customer offer linked to our Newcastle Technical Centre.

3.2.3 Promoting the Benefits of CSM Products and Services

With the large product suite of high quality raw materials available there are many benefits in using CSM products. CSM has actively worked with customers to promote the benefits of our coking coals and iron ores. Joint testing and evaluation of optimized coking coal blends has demonstrated high CSR and strength at negligible oven wall pressure at high percentages of BHP Billiton/BMA coals. Yandi ore has been a tremendous success in north Asia reaching 50% in sinter blends in Korea within 10 years. Significant work has also been carried out in China to promote the benefits of Mt Newman ore in the areas of granulation and sinter performance. Continued investment in time and people in this area demonstrates the commitment to further promoting the benefits of CSM raw materials.

Technical marketing has been and continues to be a key component of the service provided. With the decline in Research and Development in most steel companies, increasingly service and raw material suppliers are providing technical back up and support, including R&D. CSM has a very strong record in this area with many years of highly successful R&D and customer joint projects based around our research laboratories in Newcastle. This facility is unrivaled by any other supplier and provides what we see as a key competitive advantage. Our track record in collaboration in iron ore is truly

impressive with many major steel companies having benefited from work carried out at Newcastle. While much work has been focused on iron ore, recent developments have focused on coking coal with very successful joint programs with some key European steelmakers. This is an area we will be seeking to build upon in the short term via links with major global research institutions.

3.3 Growing Sustainably

3.3.1 Background

As noted previously the future outlook for steel demand is positive with China the leading driver. Additional growth is expected in steel output from India and Brazil. This will see the seaborne market expand and CSM is planning to grow to meet this emerging need from our coal, iron ore and manganese customers.

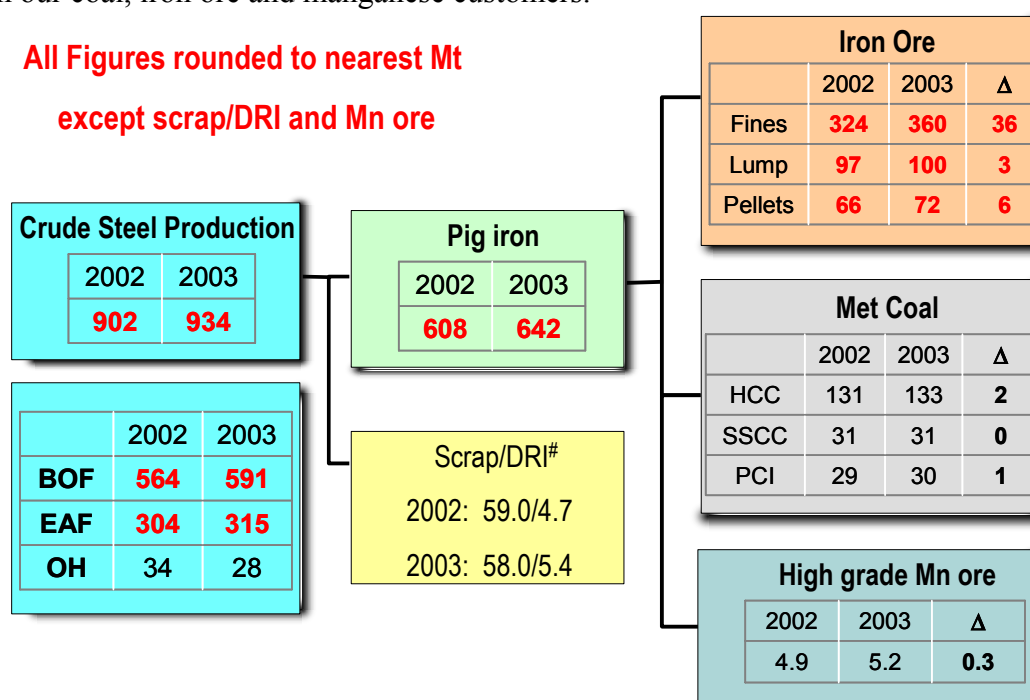


Figure 7. Steel and Raw Materials Flows 2002 and 2003 estimate

China presents the biggest opportunities for the supply of seaborne steelmaking raw materials - especially iron ore. Chinese iron ore demand has grown strongly as domestic steelmakers have sought higher grade imported ores to blend with domestic ores. Last year Chinese imports increased by almost 20Mt with the result that the seaborne market is currently extremely tight and only being supplied because iron ore producers have found additional capacity in their systems and have been drawing down stocks. Today we are running our port operations at levels around 10% higher than was believed possible a year ago. This tremendous achievement has come about due to improved efficiency throughout the entire system and we believe there is more to come.

3.3.2 Sustainable Growth

Due to the very strong customer demand, CSM is spending over US\$500M to expand the capacity of its Western Australian iron ore operations to around 100Mt by mid 2004 and is currently undertaking feasibility studies for further expansions to 120Mtpa, should the market warrant, with a wide product offering including high quality hematite, pisolite and marra mamba ores. A key feature of these expansions is that they are being designed and

implemented with a high degree of flexibility so that they are better able to match market cycles, both up and down. This will enable us to maintain and protect our market share into the future. I would like to discuss the expansion plans in a little more detail shortly.

The metallurgical coal business is also being geared up to respond rapidly to market opportunities with flexible, low cost production. BMA Queensland operations have announced the construction of the Broadmeadow punch long wall mine on the Goonyella leases at 3.1Mtpa capacity, commencing in 2006. Punch long walls are low cost, highly flexible operations that can be run according to market conditions and add significant additional capability to match future market demand. The adoption of new mining technology, such as the Universal Dig and Dump (UDD), will raise dragline efficiency enabling higher output at lower cost. The UDD is being evaluated in the northern Bowen Basin and initial results have proven potential for raising dragline productivity by over 15%. Further implementation is underway throughout the region. New mining software is also under development which has the potential to increase mining effectiveness from existing equipment, enabling additional product coal to be produced without additional equipment.

In the Illawarra, the Dendrobrium mine, a new 5.2Mtpa (3.6Mtpa clean coal) underground long wall operation is presently under construction. Due to the strong market demand initial commissioning has been fast tracked and is now expected ahead of the original schedule in early 2005. This mine is higher capacity than the mine it replaces which will give additional opportunities for improved blending for its major customer BHP Steel, and will see increased availability for exports.

Options for improving supply chain logistics at both Queensland and the Illawarra are also currently under consideration. As with iron ore, the ability of the met coal operations to expand quickly, cost effectively, and responsibly has been due to the fact that the existing operations are world class with proven infrastructure. However, we are always seeking ways to improve the business and ensure we continue to meet the needs of our customers.

3.3.3 Actively Seeking New Undeveloped Resources

Whilst our existing resource base is very large with many years of available reserves it is always important to review the global situation to seek new deposits which are located closer to markets and/or contain ores that have better properties for customers. With demand for seaborne steelmaking raw materials growing, additional supply will be required in the future and we want to be part of that new growth.

3.4 Flexible Capacity

The steel industry is a cyclical business and demand moves in line with economic fundamentals. Consequently iron ore, manganese ore and alloy demand, and to a lesser extent coking coal demand varies in line with these cycles. The traditional view of miners was to operate at as close to maximum throughput rates as possible. This left little or no spare capacity to enable them to manage cycles. However, the era of production-led businesses has gone. At BHP Billiton we are focussed on managing operating levels and planning capacity expansions, which are aligned to market demand to ensure we can consistently and efficiently supply. The ability to flexibly manage production to meet market and customer requirements is the best way to ensure stable supply arrangements with our customers and ensure long term profitability.

4. Implications of China for Steelmaking Raw Materials

China has changed the global perception for steel and raw materials. The implications for a continuation of the past 2 years on seaborne markets for iron ore, metallurgical coal and coke and manganese ore and alloy are profound. Lets briefly consider each in turn.

Iron Ore

China is the growth market for iron ore. From 50Mt in 1997 it has grown to over 111Mt in 2002 and through August 2003 imported 98Mt, for an annualized figure of around 145Mt. This will make China the largest market for seaborne iron ore, about the last record it has to break. The change in global seaborne market share for iron ore is shown in Figure 8, illustrating the recent dominance and importance of China.

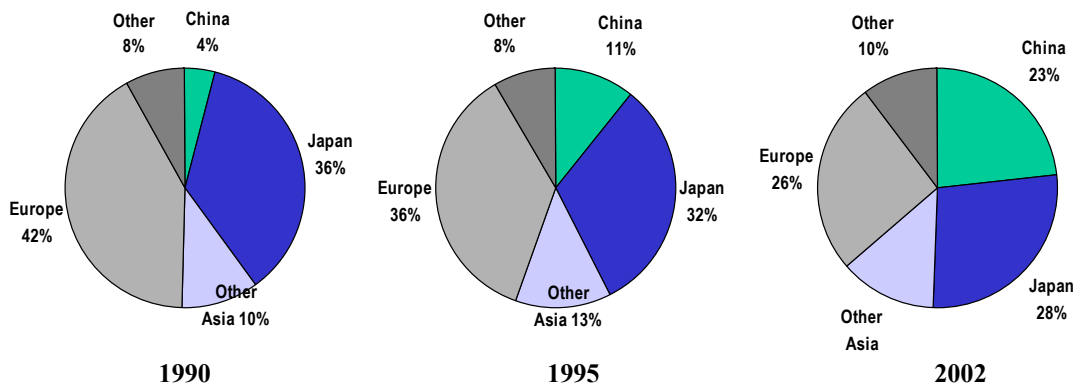


Figure 8. Chinese share of seaborne iron ore

Yet the rapid growth in Chinese demand poses challenges for the major suppliers of iron ore.

BHP Billiton's response to this challenge is to accelerate the expansion projects at Port Hedland, so that our customers have continued access to high quality ores from our mines in Australia. We are also seeking to improve logistics within China so that better parceling and distribution can be achieved for customers who require smaller lots of ore. I would now like to talk about our expansion plans in more detail.

Area C is now fully operational. We are mining. We are riling. We have shipped the first product. Just last week we formally opened this new operation and were very pleased some of our Chinese customers could join us on site for this special occasion.

The Area C operation was designed to make a maximum of 10Mtpa in its initial configuration. The plant was built to accommodate expansion and by adding an additional secondary crusher we can take the capacity up to 15Mtpa.

We are doing that now, and the process should be completed some time during December this year. Together with the addition of some further primary crushing capacity and a 5 kilometre overland conveyor at Yandi, that will take our total mining capacity to at least 100 million tonnes.

Our PACE, or Products and Capacity Expansion project, has two elements to it. The first is the expansion at Port Hedland and the second is a rail project. Port capacity as we all know is generally added in big increments. We are building a new berth, a new stockyard,

and a new re-screening plant, which we will talk about later; this takes our port capacity to around the 100 million tonnes per annum mark.

The rail component of the PACE project required the building of the MAC rail spur, which is now complete. We are also purchasing 480 new ore cars, and to cope with more and longer trains, we are building 5 new sidings and extending 5 existing ones. In addition, we have ordered an additional 8 locomotives. Much of this infrastructure is already in place and we expect the project to be fully complete by the middle of 2004.

We of course run many market forecasts. In the optimistic ones, we will need more than 100 million tonnes of capacity in 2005 with 120 million tonnes on the horizon. We are working to ensure we have enough capacity to meet the highest of these forecasts. In all of our future expansion scenarios we are planning step by step increases to our capacity, so as to ensure we meet demand and do not over shoot by investing in large increments.

There is no doubt that we are entering a period now which is analogous to what the iron and steel industry went through in the late 60s and early 70s. Supply will be extremely tight. We know that it is not enough to take a simple macro view of capacity, that in the end it breaks down to quarter by quarter, month by month, vessel by vessel and product by product. When we have booming demand, as is now the case, we will be managing stockpiles down to the vessel. We need to know with a greater degree of accuracy when vessels are going to arrive and what is required to be on them. This will require BHP Billiton to work with all our customers, to ensure that you have product available consistently and reliably. Shipping will play a key part in this equation. BHP Billiton is taking and will continue to take a more active role in the transportation and logistics of our products.

Metallurgical coal and Coke

Recent Chinese steel growth has also had dramatic effects on the global merchant coke price and seaborne met coal. China is the supplier of around 70% of the total seaborne merchant coke. The past year has seen a remarkable turnaround – just consider spot coke prices, Figure 9!

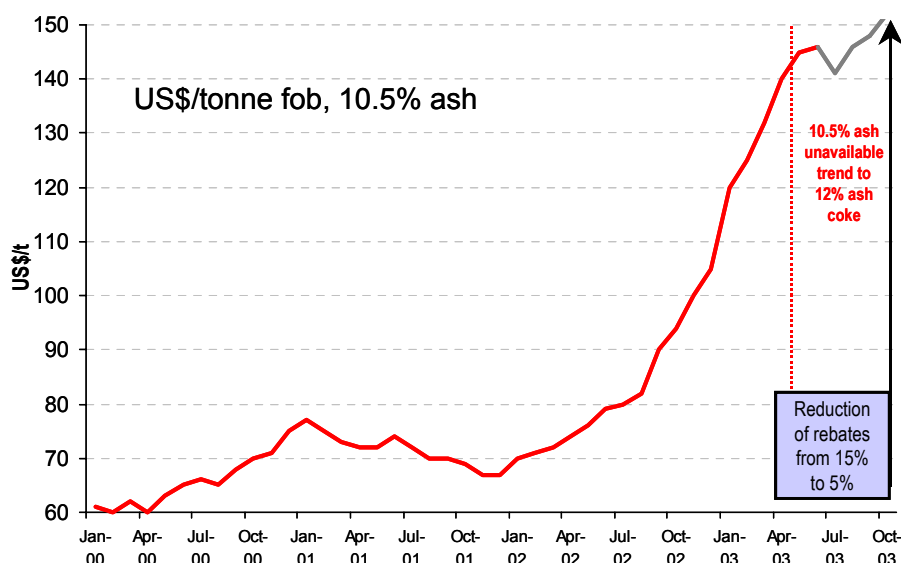


Figure 9. Chinese coke prices (US\$/t 10.5% ash)

While China has vast coal reserves, traditionally the majority of coking coal production was produced from tens of thousands of small, inefficient village based mines with a very poor safety record. Recent changes to the coal mining industry to reduce fatalities and improve safety, have seen many of these TVE mines close, which coupled with enforced closures of small highly polluting beehive coke ovens, have radically transformed the domestic coking coal and coke situation.

Although China is currently building substantial new coke oven capacity, exceedingly strong domestic demand for coke, plus local shortages of coking coal are causing severe tightening in the availability of metallurgical coke. This has led to the almost complete lack of 10.5% ash coke and the very high prices and lack of availability for export. The key driver is the shortage of domestic coking coal, particularly low volatile coking coals, which are seeing unprecedented demand and enquiries for imports. Chinese imports are likely to rise from around 200,000 tonnes in 2002 to over 2Mt in 2003 and grow substantially further in 2004. It is probable that China may become an important long term coking coal importer, particularly for steel and cokemakers in the coastal regions.

Manganese Ore and Alloys

China holds substantial amount of domestic manganese ore reserves. Current production is estimated to be around 3.5Mt. At its highest production has exceeded 7Mt (1996), but since 1999 output has been steady between 3 and 4Mt. The average grade of domestic ore is low between 20 - 25% Mn content. China's more than 200 Mn ore mines supply low Mn high Mn/Fe ratio ore to domestic smelters, predominantly for SiMn production, where domestic ore is blended with low-grade ores from Burma, India and Ghana as well as with high-grade ores from Australia, Gabon and Brazil. BHPBilliton/Samancor has been a long-term supplier of metallurgical and siliceous grade ores to the Chinese alloy industry and currently holds a 30% market share.

Manganese ore imports have been steadily increasing since the mid 1990's - in 2003 the total imports will reach 2.7Mt. The domestic and imported ores are feeding a fragmented Chinese Mn alloy industry - which is the biggest single country producer of Mn alloys in the world. Total production of Mn alloys is in excess of 2.6Mt. HCFeMn production has been stable around 1Mt since 1998, while SiMn production has grown substantially from 600,000 tonnes in 1998 to 1.6Mt in 2002.

China's domestic steel industry consumes 2Mt of Mn alloys while 600,000 tonnes are exported to global markets. Driven by strong steel production growth China's domestic Mn alloy consumption is expected to increase to over 3.5Mt during the next 10 years. Strong steel demand especially for high quality, higher value sheet steels will result in the need for higher quality Mn alloys and the increasing need for imports of high quality Mn ores, as well as imported higher grade high and medium carbon Mn alloys. Therefore China will remain a key market for high-grade manganese ores as well as a developing niche market for low phosphorus manganese alloys.

5. Summary and Final Comments

This paper has presented an outline of BHP Billiton's Carbon Steel Materials Group, its product suite and some of the key strategy elements that make it the world's premier steelmaking raw materials supplier. With the new marketing structure the strategy is well placed to gain maximum advantage presented by the meteoric rise of China over the last 2 years. China has changed the picture for the global steel, iron ore, met coal and coke, and

manganese ore and alloy industries. While the future is uncertain and hard to predict continued growth similar to the past couple of years present challenging and exciting times ahead.

BHP Billiton is, we believe, well placed to meet the demands of the global iron and steel industry as it grows and Chinese demand in particular. What will be important as we move forward will be the coordination of our supply capability and customer demand. We will be looking to establish strong relationships with steel producers in China based on mutually beneficial arrangements that include, supply and quality security for our customers and sound long term contractual arrangements for BHP Billiton. Both BHP Billiton and our customers need to approach the next few years with a flexible and cooperative approach so that demand can be met by maximizing the existing resources and infrastructure.