# INDUSTRY OVERVIEW

This and other sections of this document contain information relating to the PRC economy, the global coal industry, the PRC coal industry and the PRC coal mining machinery industry. The information contained within has been derived from official government publications, authoritative sources or was obtained from communications with PRC government agencies. We believe that the sources of the information are appropriate sources for such information and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information has not been commissioned by, or independently verified by, us or any of our respective affiliates or advisers, and no representation is given as to its accuracy.

## THE WORLD COAL INDUSTRY

Coal is one of the most important energy resources in the world. According to BP Statistical Review of World Energy 2009, the worldwide primary energy consumption amounted to 11,294.9 million tons oil equivalent in 2008, of which coal represented 29.2%, and oil and natural gas represented 34.8% and 24.1%, respectively.



## World primary energy consumption by fuel 2008

Source: BP Statistical Review of World Energy 2009

Coal reserves have a wide distribution pattern, but are particularly concentrated in the United States, Russia, China, Australia and India. According to BP Statistical Review of World Energy 2009, these countries controlled 28.9%, 19.0%, 13.9%, 9.2% and 7.1%, respectively, of the proved worldwide coal reserves at the end of 2008.

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### World coal reserves breakdown by region 2008

Source: BP Statistical Review of World Energy 2009

The Asia-Pacific region is the largest and fastest growing coal market in the world. Many major coal consumers and producers are located in the Asia-Pacific region. According to BP Statistical Review of World Energy 2009, coal consumption and production in this region accounted for 61.5% and 61.1%, respectively, of global consumption and production in 2008. From 2000 to 2008, coal consumption and production in the Asia-Pacific region increased by a CAGR of 8.1% and 8.7%, respectively, far exceeding the growth rates of worldwide coal consumption and production during the same period, which were 4.4% and 5.0%, respectively.

Coal is one of the most important energy sources in the world and the global coal production and consumption rates continue to increase. According to BP Statistical Review of World Energy 2009, between 2000 and 2008, the compound annual growth rates of global coal production and consumption were 5.0% and 4.4 %, respectively. These factors have led to a global increase in the demand for coal mining machineries.

We believe that overseas coal mining machinery manufacturers in developed countries are expanding internationally and are becoming increasingly diversified. Continuous mergers and acquisitions have created leading coal mining machinery corporations such as Germany-based DBT GmbH and U.S.-based Joy Global Inc. They currently supply coal mining machinery to coal mining markets such as the United States, Australia and South Africa as well as the PRC. The main features of their products include high mechanisation, strong technicality and good reliability.

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#### THE PRC COAL INDUSTRY

#### Coal reserves in China

According to BP Statistical Review of World Energy 2009, as at the end of 2008, China has 114.5 billion metric tons of proved coal reserves, representing 13.9% of the worldwide proved coal reserves, ranking third in the world. By contrast, China has only 2.1 billion metric tons of proved oil reserves and 86.7 trillion cubic feet of proved gas reserves at the end of 2008, representing only 1.2% and 1.3% of the world's total proved oil and gas reserves, respectively.

According to the PRC government, 67% of all the proved coal reserves in China are deposited in Shanxi, Shaanxi, Inner Mongolia and Ningxia, 20% are deposited in Xinjiang, Gansu, Qinghai, Yunnan, Guizhou, Sichuan and Chongqing, and the remaining 13% are deposited in other areas including Jiangsu, Anhui, Shandong and Henan.

#### Coal production and consumption in China

According to BP Statistical Review of World Energy 2009, China is the world's largest coal-producing country, reaching 1,414.5 million metric tons oil equivalent and accounting for 42.5% of global coal production. China is also the world's largest coal-consuming country, with national coal consumption amounting to 1,406.3 million metric tons oil equivalent in 2008, accounting for 42.6% of global consumption. BP Statistical Review of World Energy 2009 considers coal to be China's most important energy resource, accounting for 70.2% of the country's total primary energy consumption in 2008.



### Primary energy consumption in China by fuel 2008

Source: BP Statistical Review of World Energy 2009

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According to BP Statistical Review of World Energy 2009, China's coal production increased from 656.7 million metric tons oil equivalent in 2000 to 1,414.5 million metric tons oil equivalent in 2008, representing a CAGR of 10.1%, while China's coal consumption increased from 667.4 million metric tons oil equivalent in 2000 to 1,406.3 million metric tons oil equivalent in 2008, representing a CAGR of 9.8%. These growth rates are much higher than the CAGR percentages for world-wide coal production and consumption of 5.0% and 4.4%, respectively, for the same period.



## Coal production and consumption growth in China

Source: BP Statistical Review of World Energy 2009

## THE PRC COAL MACHINERY INDUSTRY

## Growth of China's economy and fixed asset investment

According to the National Bureau of Statistics of China (中華人民共和國國家統計局), China's GDP increased from RMB9,921 billion in 2000 to RMB30,067 billion in 2008, representing a CAGR of 14.9%. In light of China's fast growing GDP, fixed asset investment in China recorded significant growth from RMB3,292 billion in 2000 to RMB17,229 billion in 2008, representing a CAGR of 23%. In the future, China is expected to maintain a relatively high economic growth rate.



### **China GDP growth**

## Fixed asset investment in China



Source: National Bureau of Statistics of China (中華人民共和國國家統計局)

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### Growing investments in the PRC coal mining industry

According to the National Bureau of Statistics of China (中華人民共和國國家統計局), fixed asset investment in China's coal washing and selecting industry increased from RMB69.0 billion in 2004 to RMB241.0 billion in 2008, representing a CAGR of 36.7%. In 2009, we expect investments in the PRC coal mining industry to benefit from the PRC government's economic-stimulus package and to continue to grow. In addition, fixed asset investment in the coal washing and selecting industry for the first eight months of 2009 increased by 36.0% as compared to the same period in 2008. The significant growth of investment in China's coal mining industry stimulated an increase in demand for coal mining machinery and equipment which is key to the coal mining industry.



#### Fixed asset investment in China coal mining industry

Source: National Bureau of Statistics of China (中華人民共和國國家統計局)

#### Growth of China's coal machinery production

As the PRC coal producers increasingly injected large amounts of investments into fixed assets, including the purchase and maintenance of coal mining machinery, China's coal mining machinery industry enjoyed significant production growth during the past few years. According to the report by China National Coal Mining Machinery Industry Association (中國煤炭機械工業協會) published at www.coalchina.org.cn in July 2009, the total sales value of China's coal mining machinery industry grew from RMB10,410.8 million in 2003 to RMB 57,988.2 million in 2008, representing a CAGR of 41.0%.

							2003-2008
	2003	2004	2005	2006	2007	2008	CAGR
(In RMB million except CAGR data)							
Total sales value of coal mining							
machinery by PRC manufacturers							
to domestic customers in the PRC	10,410.8	11,828.7	21,116.3	28,997.9	49,609.0	57,988.2	41.0%
Total sales value of certain products:							
Roadheader	354.0	844.9	1,260.0	1,246.4	1,846.8	2,551.7	48.4%
Coal mining machine	1,012.0	1,233.0	2,375.0	2,980.0	3,003.0	3,635.5	29.1%
Hydraulic support structure	1,425.3	2,680.8	4,475.5	7,467.8	9,351.8	10,809.5	50.0%

Source: China National Coal Mining Machinery Industry Association (中國煤炭機械工業協會)

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# Ranking of roadheader manufacturers in the PRC in terms of number of roadheaders sold in 2008

Position	Name of Manufacturers	Number of Roadheaders sold in 2008 <sup>(1)</sup>
1	Sany Heavy Equipment Co., Ltd. (三一重型裝備有限公司)	366
2	Jiamusi Coal Mining Machinery Limited (佳木斯煤礦機械有限公司)	362
3	Taiyuan Branch of China Coal Research Institute (煤炭科學研究總院太原分院)	218
4	Shijiazhuang Coal Mining Machinery Co., Ltd. (石家莊煤礦機械有限公司)	120
5	Shanghai Chuangli Coal Mine Equipment Co., Ltd. (上海創立礦山設備有限公司)	74

Source: China National Coal Mining Machinery Industry Association (中國煤炭機械工業協會)

#### Note:

(1) The number of roadheaders sold by us in 2008 was based on the time of sale of the roadheaders (i.e. when we entered into sale and purchase agreements for the roadheaders with our customers), whereas the number of roadheaders sold as disclosed in the section headed "Financial Information — Description of the Selected Components of Results of Operations — Revenue" in this document was based on the number of roadheaders we had sold for which revenue had been recognised. We do not recognise revenue until the roadheaders are delivered to customers, which only occurs after the entry into sale and purchase agreements with our customers.

### **Competitive landscape**

As a result of the relative price competitiveness, continuous improvements in quality and technological standards and also due to advantages in the provision of after-sales services in China, domestically produced coal mining machinery is still mainly used in coal mines in China. According to a report by the China National Coal Mining Machinery Industry Association (中國煤炭機械工業協會) in July 2009, imported coal mining machinery accounted for only approximately 3.0% of the total quantity of domestic coal mining machinery sold in China during 2008.

According to the China National Coal Mining Machinery Industry Association (中國煤炭機械工 業協會), major players in the PRC coal mining machinery and equipment industry include Sany Heavy Equipment, International Mining Machinery (國際煤機), China Coal Group Equipment Company (中煤集團裝備公司), China Coal Research Institute (煤炭科學研究總院) and Taiyuan Mining Machinery Group (太原礦山機器集團). These companies, together with their subsidiaries, each enjoy advantages in various types of coal mining machinery products such as roadheaders, coal mining machines, hydraulic support structures and conveyors. With respect to the manufacturers of roadheaders, Sany Heavy Equipment enjoys the largest market share in China in terms of the total number of roadheaders sold in 2008.

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# Relevant factors in driving the growth of future demand in the PRC coal machinery industry

The coal mining industry and the coal machinery industry in China are developing rapidly. We are of the opinion that the following factors could promote further growth in demand from the coal mining machinery industry in the coming few years.

Coal mining mechanisation in China

• Demand for the construction of new coal mines

The PRC government encourages the building of large coal mine bases in areas including Shendong, north of Shaanxi province, Huanglong (Huating), north, middle and east of Shanxi province, west of Shandong province, north and south of the Huai River, middle of Hebei province, Henan province, Yunnan and Guizhou provinces, east of Inner Mongolia (Northeast of China) and east of Ningxia. The Eleventh Five-year Plan further envisages that during the relevant period, large and medium-sized coal mines shall be constructed at the large coal mine bases, focusing on the construction of modernised open mines with an expected annual output of over 10 million metric tons and safe and efficient wells with an expected annual output of over 10 million metric tons. By 2010, the combined output of coal bases in China is expected to reach 2.24 billion metric tons. The building of these large coal bases, modernised open mines and safe and efficient wells is expected to stimulate the market demand for coal mining machinery products in China.

According to the "National Mining Resources Plan (2008-2015)", which was issued by the Ministry of Land and Resources of the PRC on 7 January 2009, coal production volume will increase from 2.6 billion metric tons in 2008 to more than 3.3 billion metric tons during the period from 2008 till 2015, with an average annual growth rate exceeding 3.4%.

Localisation of coal mining machinery and equipment

The Eleventh Five-year Plan indicated that the PRC coal mining industry will speed up the innovation of its coal mining technology in a fast and steady pace, and that the PRC government is

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keen to promote the localisation of production of major coal mining equipment in the coal mining industry. To actively implement the State Council's preferential import tax policy to boost the development of the equipment manufacturing industry, the Finance Ministry, the National Development and Reform Commission, the General Administration of Custom and the State Administration of Taxation of the PRC jointly issued the "Circular on Import Taxes Policies Related to Implementing Certain Opinions of the State Council on the Acceleration and Revitalization of the Equipment Manufacturing Industry" (《關於落實國務院加快振興裝備製造業的若干意見有關進口税收 政策的通知》) on 14 January 2007. The circular provides that a "refund after collection" preferential policy shall be applicable for import duty and value added tax on key components and raw materials which cannot be produced domestically, and which are imported for the development and production of equipment by domestic enterprises in sixteen key areas of major technological equipment including large scale integrated coal extraction, lifting and coal washing and selecting equipment as well as large open mining equipment. Furthermore, for major technological equipment to which a preferential policy of "refund after collection" for imported components and raw materials has been applied, tax exemption policy for import goods for corresponding manufacture of large machinery and sets of equipment will not be implemented without the joint approval and confirmation of the Finance Ministry, the National Development and Reform Commission, the General Administration of Custom and the State Administration of Taxation. For some of the large machinery and equipment, a transitional measure will be applied regarding the implementation of import tax exemption policy. under which the rate and scope of tax exemption will decrease after review and approval according to supply and demand. At the end of the transitional period, the import tax exemption policy will no longer be implemented. These measures serve to promote the localisation of production of coal mining equipment as well as boost the development of the coal mining machinery and equipment manufacturing industry in the PRC.

• An increase in the demand for up-to-date equipment and after-sales services

Generally, it takes about five years to design new coal mining machinery products and it takes approximately five years to replace and/or upgrade such products. Therefore, we believe the rapid growth in the sales volume of PRC coal mining machinery products over the past few years suggests that the demand for up-to-date and new PRC coal mining machinery will continue to grow rapidly over the next few years. In addition, the rapid growth in the sales volume of coal mining machinery products will drive the demand for after-sale services.

## **Policy Support**

The PRC government promulgated a series of policies and measures with an aim to encourage rapid, sustainable and healthy development of the coal industry and the coal mining machinery industry.

• "Several Opinions of the State Council Regarding the Promotion of Sound Development of the Coal Industry" (《國務院關於促進煤炭工業健康發展的若干意見》)

This document states that for the time being, reconstruction, rectification and standardisation efforts shall be focused on small coal mines in China. Large-scale coal enterprises are encouraged to merge and reconstruct their small and medium-sized coal mines while small and medium-sized

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coal mines are encouraged to improve through reforms. Coal mining technological reforms shall be vigorously promoted for small and medium-sized coal mines, while large-scale coal mines shall adopt the standard long-wall mining method. Small coal mines that are not properly built, not in compliance with safety standards or environmental protection requirements or are severely inefficient shall be further phased out and eventually closed.

In addition, the upgrading of technology for coal mining and the manufacturing of coal mining equipment shall be expedited. Advanced technology shall be adopted to speed up the construction of high-output and high-efficiency mines and the modernisation of coal mining equipment. Mechanisation of small and medium-sized coal mines shall be promoted vigorously. Research and development for the manufacture of major coal technologies and equipment shall be promoted. Alliances between enterprises, scientific and research institutions and various academies shall also be encouraged to spur technological innovation.

• "Several Opinions Regarding Acceleration and Revitalisation of the Equipment Manufacturing Industry" (《國務院關於加快振興裝備製造業的若干意見》)

The PRC government identified certain key equipment and products which shall benefit from preferential policies and guidance so as to accomplish breakthroughs in certain areas. Such key equipment and products include large-scale integrated coal mining equipment, lifting, coal washing and selecting equipment, and large equipment for open and open-ground mines. The PRC government encourages large-scale integration coal mining equipment, lifting and coal washing and selecting equipment.

In order to achieve the above goals, the PRC government has promulgated a series of supporting policies, such as imposing a preferential import duty, encouraging the purchase and use of locally produced equipment as well as increasing capital support for the manufacture of such equipment.

• "Catalogue for the Guidance of Foreign Investment Industries (revised in 2007)" (《外商投資產業指導目錄 (2007年修訂)》)

According to the Catalogue for the Guidance of Foreign Investment Industries (revised in 2007) (《外商投資產業指導目錄 (2007年修訂)》), certain products produced by our Company, such as roadheaders, are listed in the Catalogue of Encouraged Foreign Investment Industries (鼓勵外商投資產業目錄) and benefit from preferential foreign investment policies issued by the PRC government.