

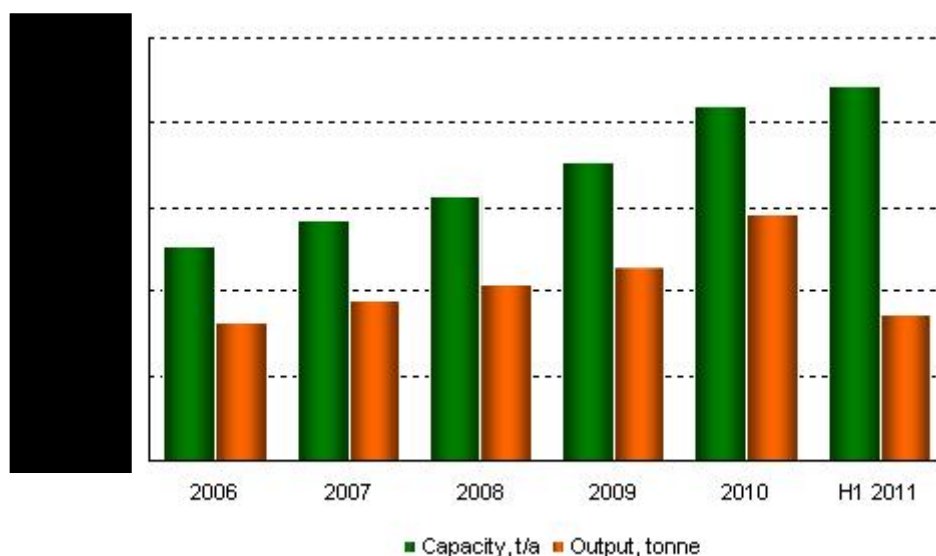
Note: Key information/data here is hidden, while in the report is not

1.2.1 Titanium dioxide production information in China

The production of titanium dioxide in China has accomplished a XXX in the past six years. Though some medium or small plants suspended production or even shut down due to the global financial crisis, the situation gets much better in 2010. For example, XXX Co., Ltd., who suspended its production in the end of 2009 and restarted production in late 2010, is a witness. And the recovery is mostly attributed to the adoption of some supportive national policies of expanding domestic demand and the increasing downstream industries. The operating rates are XXX% and XXX%, respectively in 2010 and H1 2011, compared with XXX% in 2009.

In summary, from 2006 to 2011, domestic titanium dioxide capacity has increased from XXXt/a to XXXt/a; from 2006 to 2010, the output has increased from XXX tonnes to XXX tonnes, with the CAGR of XXX%.

Figure 1.2.1-1 Titanium dioxide capacity and output in China, 2006-H1 2011



Source: CCM International

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From 2006 to 2011, domestic rutile titanium dioxide capacity has increased from XXXt/a to XXXt/a. The output of domestic rutile titanium dioxide has increased from XXX tonnes to XXX tonnes from 2006 to 2010, with the CAGR of XXX%, while the output of anatase titanium dioxide has increased from XXX tonnes to XXX tonnes, with the CAGR of XXX%.

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1.3 Domestic titanium dioxide capacity expansion and new project

On the whole, in 2011, the situation of titanium dioxide production is that the supply in low-end production XXX, while the supply in high-end production XXX. Manufacturers in China have realized the situation and begin to...

Since 2011, the domestic capacity of titanium dioxide has been increasing at XXX, which is mainly attributed to the government limitation policies on the production with sulfate process. On the contrary, new projects with chloride process are promoted by government policies, so there're many companies planning to build up new production lines with chloride. Among the new projects under construction in China, the newly capacity with chloride process accounts for about XXX% of the total capacity. The capacity with chloride process is estimated to be XXXt/a by the end of 2012, accounting for XXX% of the total capacity.

In addition, the Promotion Scheme for Clean Production in Titanium Dioxide Industry has been published by MIIT, and it definitely points out that...

Table 1.3-1 Major titanium dioxide capacity expansion and new project in China, 2010-2011

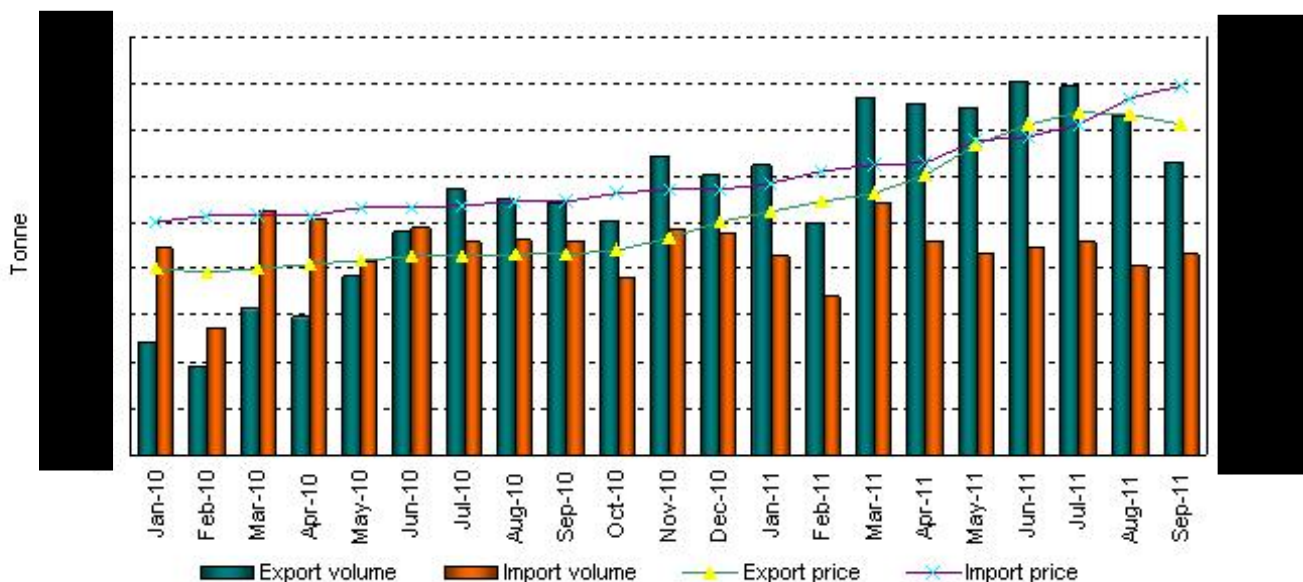
No.	Abbreviation of enterprise	Original capacity, t/a	Expanded capacity, t/a	Expected Finish date	Technology	State Nov. 2011
1	Pangang Group	XXX	XXX	2013	Chloride	Under construction
2	XXXXX XXXXX	30,000	60,000	N/A	Chloride	At plan stage
3	XXXXX XXXXX	XXX	XXX	2013	Chloride	At plan stage
4	XXXXX XXXXX	XXX	XXX	2012	Chloride	Under construction
5	XXXXX XXXXX	100,000	200,000	N/A	Sulfate	At plan stage
6	Jinzhou Titanium	XXX	XXX	2012	Chloride	Under construction
7	XXXXX XXXXX	30,000	200,000	2015	Chloride	At plan stage
8	XXXXX XXXXX	70,000	50,000	N/A	Sulfate	At plan stage
9	XXXXX XXXXX	70,000	30,000	2013	Sulfate	Under construction
10	XXXXX XXXXX	XXX	XXX	2013	Sulfate	Under construction
11	XXXXX XXXXX	XXX	XXX	H1 2012	Sulfate	Under construction
12	XXXXX XXXXX	XXX	XXX	N/A	Sulfate	Under construction
13	Jiangsu GPRG	XXX	XXX	H2 2012	Sulfate	Under construction

Source: CCM International

3.2 Latest trend of Chinese titanium dioxide international trade

The import volume of titanium dioxide fluctuates approximately between XXX tonnes per month and XXX tonnes per month from Jan. 2010 to Sept. 2011, while the export volume soars from approximately XXX tonnes per month to XXX tonnes per month. And the prices of import and export both go up steadily.

Figure 3.2-1 China's titanium dioxide international trade situation, Jan. 2010-Sept. 2011



Source: CCM International

The monthly export volume increased sharply in China, from XXX tonnes in Jan. 2010 to the peak XXX tonnes in June 2011, with a growth rate of nearly XXX%; the figure then drops to XXX tonnes in Sept. 2011. The import volume, however, doesn't increase much, fluctuating between XXX tonnes and XXX tonnes per month. In July 2010, the export volume exceeds the import volume for the first time in Chinese titanium dioxide trading history, with the net export volume of XXX tonnes. The peak of net export volume is XXX tonnes, in June 2011.

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With the short supply of titanium dioxide in the world, there were several rounds of price raise of some dominating producers such as XXX in the past two years. And the average import price increases steadily from USDXXX/t in Jan. 2010 to USDXXX/t in Sept. 2011, and the growth rate is about XXX%.

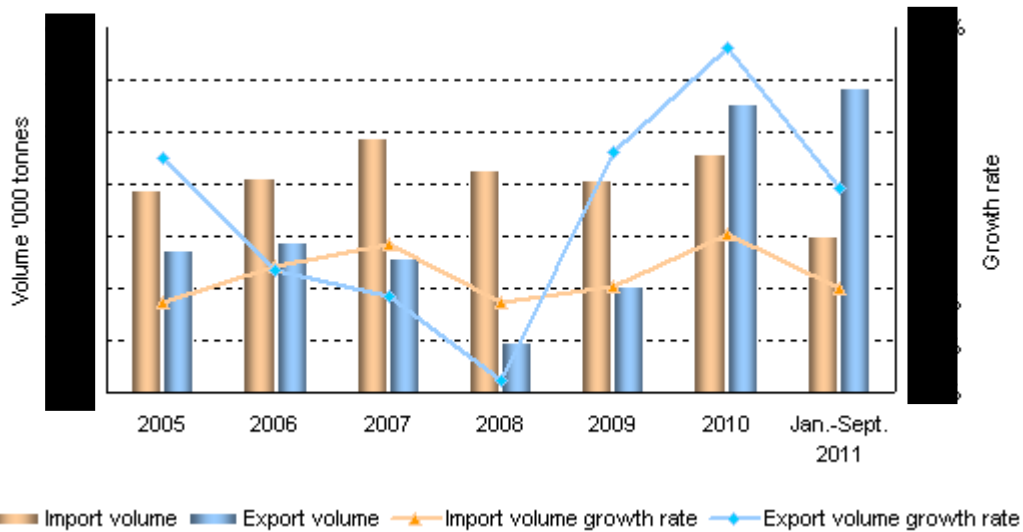
The export price increases slightly from Jan. 2010 to Sept. 2010. But with the increase of raw material price and international titanium dioxide price, the export price increases quickly from Oct. 2010 to July 2011, and the growth rate is about XXX%...

4 Import and export analysis

4.1 Overview

Thanks to the moderate recovery of global macro economy after the recession started in 2008, China's titanium dioxide export has been rebounding fast since 2009. In 2010, the export volume is XXX tonnes, while the import volume is just XXX tonnes. The export volume has XXX the import volume. During the first nine months of 2011, the export volume has XXX, while the import volume XXX. It is obvious that China has been a titanium dioxide XXX since 2010.

Figure 4.1-1 China's titanium dioxide international trade evolution, 2005-Sept. 2011



Source: CCM International

The global selling price of titanium dioxide has XXX from 2010 to Sept. 2011. Because of some idle production capacity in Europe and America, titanium dioxide supply in these regions has been tight after 2009, boosting the global selling price of titanium dioxide. Different from the former action...

The export price has fallen back after July 2011, while the import price turns to increase.

Figure 4.1-2 China's titanium dioxide import and export prices evolution, 2007-Sept. 2011



Source: CCM International

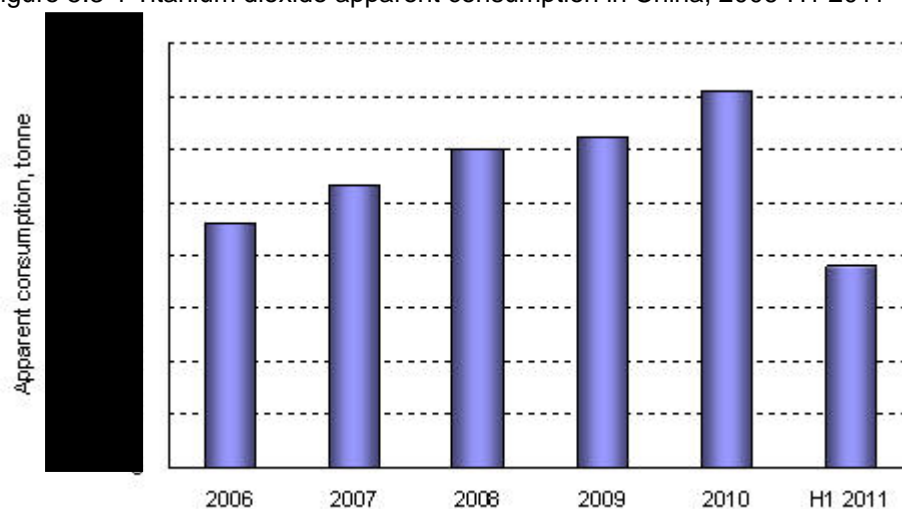
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5.3 Chinese titanium dioxide consumption situations

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From 2006 to 2010, the apparent consumption of domestic titanium dioxide increased from XXX tonnes to XXX tonnes, with the CAGR of XXX%, and the apparent consumption goes to XXX tonnes in H1 2011.

Figure 5.3-1 Titanium dioxide apparent consumption in China, 2006-H1 2011



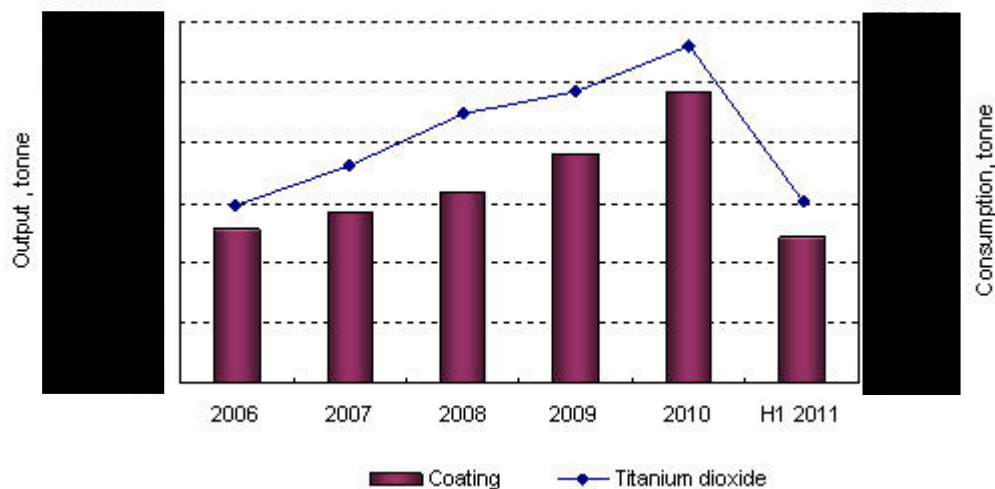
Source: CCM International

5.3.1 Coating

In China, coating is the largest consumption field of titanium dioxide, with about XXX% of the total used in the industry in H1 2011, reaching about XXX tonnes.

From 2006 to 2010, the consumption volume in the coating industry increased from XXX tonnes to XXX tonnes, with the CAGR of XXX%. There are three major categories of coating using titanium dioxide, which are architectural coating, industry coating and specialty coating.

Figure 5.3.1-1 Titanium dioxide consumption in the coating industry and output of coating in China, 2006-H1 2011



Source: CCM International

Architectural coating used most titanium dioxide in coating industry in 2009 with consumption volume of XXX tonnes, since there were many big infrastructure projects in China, such as the reconstruction of Sichuan Province after earthquake, Guangzhou Asian Games, Shanghai Expo and many other domestic stimulus building projects during the global financial crisis...

Industry coating ...

In summary, titanium dioxide used in the coating industry are required the characteristics of...

Table 5.3.1-1 Some end-users of titanium dioxide in the coating industry in China, 2011

No.	Company name	Titanium dioxide demand volume, tonne	Type	Origin
1	Nippon Coating (Chengdu) Co., Ltd.	XXX	XXX	XXX
2	XXXXXXXXXXXXXXXXXXXX Co., Ltd	XXX	XXX	Imported, domestic
3	XXXXXXXXXXXXXXXXXXXX Co., Ltd.	XXX	XXX	Imported
4	XXXXXXXXXXXXXXXXXXXX Co., Ltd.	XXX	Rutile, anatase	Imported, domestic
5	XXXXXXXXXXXXXXXXXXXX Co., Ltd.	XXX	XXX	Imported
6	XXXXXXXXXXXXXXXXXXXX Co., Ltd.	100	XXX	Domestic

Source: CCM International