China Polyester Industry

Review & Outlook

Charles Guo
Senior Analyst / CCF
June 2015, India
About us

- Found in 1997, the 1st China Man-made Fiber Industry Consultancy in China.

- CCFGroup has released market info on petrochemicals and aromatics since 2014.

- CCFGroup work for 90% polyester enterprises, 95% viscose enterprises in China.

- Pecinfo founded in 2012. CCFGroup has released market info on petrochemicals and aromatics since 2014.

- CCFGroup has extended the strengths in chemical fiber industry to petrochemicals, together with CCF, TTEB and PECinfo.
China Polyester--Macro economy

- **Real estate investment growth**
- **GDP growth, RHS**
- **Cumulative growth of export value %**
- **Cumulative growth of import value %**
- **Total fixed asset investment**
- **Newly added fixed asset investment, RHS**
- **Real estate investment, RHS**
- **Cumulative growth of retail sales of social consumer goods %**
China Polyester Review

Main features

1. Oversupply intensified in the whole polyester chain with slower demand.

2. PTA factories united to curb production amid squeezing margins.

3. “Disappearing ACP” leads to wider fluctuating range of market price.


5. More polyester products exported to the overseas while imports of polyester raw materials are decreasing.
Key word I: Non-fiber PET increases
The majority remains the fiber grade polymer, while the capacity of non-fiber products are growing.
China Polyester Review

China polyester capacity in 2014 by product

<table>
<thead>
<tr>
<th>Polymer</th>
<th>Capa(10kt)</th>
<th>Percentage of Asia</th>
<th>Percentage of world</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFY&amp;FGPET</td>
<td>2861</td>
<td>76%</td>
<td>71%</td>
</tr>
<tr>
<td>BG PET</td>
<td>746</td>
<td>55.7%</td>
<td>28%</td>
</tr>
<tr>
<td>PSF</td>
<td>655</td>
<td>57%</td>
<td>53.2%</td>
</tr>
<tr>
<td>PET Film</td>
<td>156</td>
<td>53.8%</td>
<td>44.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4418</strong></td>
<td><strong>66%</strong></td>
<td><strong>52.6%</strong></td>
</tr>
</tbody>
</table>
Key word II: Oversupply
By 2014, China polyester polymerization capacity reached about 4.4 million metric tons.
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China polyester supply and demand

Output Yearly growth

Unit: 10KT

Yearly growth:
- 2009: 17%
- 2010: 16%
- 2011: 10%
- 2012: 8%
- 2013: 2%
- 2014: 0%

POY inventory

Days

Jan-14, Feb-14, Mar-14, Apr-14, May-14, Jun-14, Jul-14, Aug-14, Sep-14, Oct-14, Nov-14, Dec-14
China polyester industry kept operating near the bottom in 2014 with slower end-user demand growth but oversupply. Overall polyester O/R was lower than 2013 level as some large scale enterprises took the initiative to curb production and some PET chip and PSF producers who were in severe losses previously have reinforced the strength of output cut.
Key word III: Thinner Downstream
In 2014, twisting machines increased by 800 pieces or 6.02% to 14,100 pieces. But small-scale twisters were unwilling to invest in new expansions amid relatively high receivables accounts and sales cost though cash flows were not bad. In 2014, incremental machines mainly come from some large-scale twisting plants or spinning plants.
Textile industry maintained steady operations in 2014

- Given low feedstock prices, weaving margins improved and inventory pressure eased but the amount of receivable accounts remained high and quite a few weaving plants went bankrupt. The average loom run rate was about 67.5% in 2014, down 0.5% from 2013 rate.
Textile industry maintained steady operations in 2014

Although indicators showed recovering signs, the growth rates of textiles and apparel were both low comparing to previous rates. Excluding the impact of bubbles in trade data of last year, exports of 2014 still improved limitedly.

According to National Bureau of Statistics, the growth rate of domestic textile and apparel sales declined somewhat despite rebounds in the second and third quarters.
Key word V: Polyester-Better profit
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Oversupply in upstream section intensified, squeezing PX/PTA margin

2014 capacity growth:
- PTA: 30.6%
- PX: 13.6%
- Polyester: 8.2%
Oversupply in upstream section intensified, squeezing PX/PTA margin

PTA plants have been stuck in losses for over two years. In 2014, spread between PX & naphtha also decreased sharply from 2013’s $576/mt to $362/mt. Cash flow of PX has been squeezed by more than $200/mt.
Pressure of capacity glut in polyester market eased somewhat.

Cash flow of PFY and PSF has improved substantially and margins of PET bottle chip and fiber chip have broken even.
Key word IV: 
Production cutbacks, wider price fluctuation
China PTA O/R dropped sharply from 80-90% early 2014 to 60-70% in mid-year, pushing price to rebound substantially. But entering the third quarter, polyester feedstock slipped again as the PTA alliance divided. The drastic move of PTA O/R widened the price moving range of polyester products.
PX: ACP impact fading away, spot proportion up

Asian PX market fluctuated on a steep downtrend in 2014 under the double impact of oversupply and plunging crude oil. PX prices rebounded strongly and rushed to the yearly high during May and July due to production curtailment and delayed new capacities.

Major Chinese PX ACP buyers choose to use PX spot average price in PTA contact settlement, so PX ACP negotiation will become more difficult in 2015.

<table>
<thead>
<tr>
<th>Year</th>
<th>Asian major suppliers</th>
<th>PX spot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>1415</td>
<td>1353</td>
</tr>
<tr>
<td>Feb</td>
<td>No settlement</td>
<td>1290.5</td>
</tr>
<tr>
<td>Mar</td>
<td>No settlement</td>
<td>1206</td>
</tr>
<tr>
<td>Apr</td>
<td>No settlement</td>
<td>1212</td>
</tr>
<tr>
<td>May</td>
<td>No settlement</td>
<td>1221</td>
</tr>
<tr>
<td>Jun</td>
<td>No settlement</td>
<td>1341</td>
</tr>
<tr>
<td>Jul</td>
<td>No settlement</td>
<td>1418</td>
</tr>
<tr>
<td>Aug</td>
<td>No settlement</td>
<td>1361</td>
</tr>
<tr>
<td>Sep</td>
<td>No settlement</td>
<td>1257</td>
</tr>
<tr>
<td>Oct</td>
<td>1210</td>
<td>1105</td>
</tr>
<tr>
<td>Nov</td>
<td>No settlement</td>
<td>1017.5</td>
</tr>
<tr>
<td>Dec</td>
<td>No settlement</td>
<td>877</td>
</tr>
</tbody>
</table>
Key word VI: Export & Import
PX import volumes are estimated to decrease gradually year-on-year with more new domestic units to be on stream.
PTA export volume may keep increasing rapidly and the monthly export volume may exceed 50 KT in 2015 while the monthly import volume may decrease to around 50 KT, so PTA import and export may reach a balance or China may even become a net exporter.
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China polyester export growth by product

Exports
- PFY volume
- PSF volume
- BG PET chip volume

Exchange rates
- USD/CNY
- EUR/CNY

Graph showing export growth and exchange rates from 2010 to 2014.
China polyester outlook in 2015
China polyester outlook in 2015

Polyester capacity may keep high speed growth in 2015. Polyester capacity is anticipated to increase by 3.35 million tons in 2015, but effective capacity may be around 2.7 million tons, considering some plants may only start up half the total and some may get delayed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Company</th>
<th>Capacity (kt/yr)</th>
<th>Start-up time</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFY</td>
<td>Southeast New Materials</td>
<td>400</td>
<td>Early Mar</td>
</tr>
<tr>
<td></td>
<td>Xin Feng Ming Zhongshi (Huzhou)</td>
<td>250</td>
<td>Mid Mar</td>
</tr>
<tr>
<td></td>
<td>Xiaoshan Shuangtu</td>
<td>250</td>
<td>End Mar</td>
</tr>
<tr>
<td></td>
<td>Shenghong Chemical Fiber (Guowang)</td>
<td>250</td>
<td>Late Mar</td>
</tr>
<tr>
<td></td>
<td>Huaxiang High Fiber</td>
<td>400</td>
<td>Feed the unit in Apr, and start 50%</td>
</tr>
<tr>
<td></td>
<td>Xin Feng Ming Zhongshi (Huzhou)</td>
<td>250</td>
<td>Second half of 2015</td>
</tr>
<tr>
<td></td>
<td>Jiangyin Xingye Polytech(Sanfangxiang)</td>
<td>200</td>
<td>Second half of 2015</td>
</tr>
<tr>
<td></td>
<td>Xiaoshan Shuangtu</td>
<td>250</td>
<td>Second half of 2015</td>
</tr>
<tr>
<td></td>
<td>Xiaoshan Hongjian</td>
<td>200</td>
<td>May be delayed</td>
</tr>
<tr>
<td></td>
<td>Siyang Haixin</td>
<td>250</td>
<td>May be delayed</td>
</tr>
<tr>
<td></td>
<td>Fujian Jingwei</td>
<td>200</td>
<td>Q4 2015</td>
</tr>
<tr>
<td>PET film</td>
<td>Fujian Billion</td>
<td>200</td>
<td>Second half of 2015</td>
</tr>
<tr>
<td>PSF</td>
<td>Fujian Shanli</td>
<td>250</td>
<td>Jan</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3350kt</td>
<td></td>
</tr>
</tbody>
</table>
China polyester outlook in 2015

- Ningbo Zhongjin Petrochemical will newly add 1.8 million tons/yr of PX unit. PX market may adjust further on supply pressure outside China. But everything is possible, especially in 2015, such as Dragon’s explosion, etc.

- Total PTA capacity may reach 50 million mt/yr in 2015, and its absolute amount will be much higher than polyester capacity by end year. If taking the coefficient 0.86 into consideration while calculating PTA demand of polyester sector, PTA run rate may face great pressure.

- MEG will welcome its startup cycle after years of interregnum, so the market climate may weaken. But it developed in a relatively healthy way in Q1 2015 as O/R stays at low levels.
Polyester Filament Yarn

- Overcapacity may stay unchanged in 2015.
- PFY spot is expected to fluctuate in line with feedstock.
- PFY producers are able to gain some margins through lower cost than before.
- Besides, profits in downstream weaving plants also improved amid lower PFY prices.
Bottle grade PET chip

- **Depend on feedstock**: Spot price of PET bottle chip is expected to fluctuate in line with feedstock.

- **S/D improves**: Supply and demand situation is expected to improve somewhat in China.

- **Anti-dumping**: Export demand may be affected regionally by the anti-dumping measures.

- **Better profit**: Cash flow is likely to improve further.
Capacity glut of direct-spun PSF may remain severe in 2015 as most new plants built in 2014 will be released in 2015.

Avoid unhealthy competition: Producers still need to actively control O/R, strongly expand export market and increase differential products to avoid unhealthy competition.

Market fluctuation may intensify: Influence form the bottom approaching cotton price may emerge in 2015. Under the background of sluggish domestic demand and stuck end-user export, PSF stock has to be strictly controlled to avoid risks. Meanwhile, market fluctuation may intensify given PSF futures is released.
Conclusion

• 1. Profits of polyester products may improve in 2015 amid lower cost;
• 2. Supply and demand remains key focus;
• 3. Overseas exploration of polyester product and feedstock PTA;
• 4. Market fluctuation may intensify;
Invitation

- The 3rd International PET forum will be held on Nov 5-6, 2015.

- In 2014, we invited famous industry experts from China, South Korea, India, Germany and Italy, with attendees from over 15 countries. Topics involves polyester feedstock, PET bottle chip, PET film, PET sheets, PET Technologies, beverage, etc. This year, one of our focuses will be on RPET.

- If you have plans to join us, please contact me or my colleague Gavin after the conference.
Thank you!

- 谢谢！

Tel:0571-83786512
E-mail: gyc@ccf.com.cn
Skype:charles514617_4