Insulation in China

Industry Study with Forecasts for 2016 & 2021

Study #2932 | January 2013 | $5400 | 209 pages
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**INDUSTRY STRUCTURE**
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Demand to grow 9.4% per annum through 2016

Demand for insulation materials in China is projected to grow 9.4 percent per year through 2016 to ¥65.7 billion. Continued increases in building construction and output in the manufacturing sector will drive advances. Further growth will be spurred by changes in building codes to reduce energy consumption in building applications as well as efforts to reduce energy use in manufacturing processes.

Building construction markets to post double-digit gains through 2016

Building construction markets will continue to account for more than two-fifths of China's total insulation demand. The residential and nonresidential segments will each expand at 10 percent per year through 2016, supported by healthy growth in building construction. New multifamily housing starts, driven in large part by China's continuing urbanization, and strong fixed investment activity in office, commercial, institutional, and other highly insulated structures such as power and petrochemical plants will spur market gains for insulation materials. In addition, improvement and replacement of insulation in existing housing in order to raise energy efficiency, as well as to enhance comfort, will continue to further market gains.

Continued industrialization in China will boost demand. Efforts to reduce energy consumption and costs in these applications -- by both manufacturers and the government -- will also spur demand gains in this market. Demand in other key markets will be driven by rapidly expanding output of insulation-containing appliances and transportation equipment.

Foamed plastics to remain leading material by value

In value terms, foamed plastics will continue to dominate the Chinese insulation market, accounting for more than four-fifths of demand in 2016. Foamed plastics' high insulating value, moisture resistance, and ease of installation will continue to support demand gains going forward. However, demand for fiberglass and mineral wool will post faster growth through the forecast period, benefiting from their better fire retardance than that of foamed plastics.

Northwest, Southwest regions to see fastest gains

Regional demand for insulation materials varies substantially due to differences in demographics, economic activity, and climate. With 29 percent of China's population and 37 percent of the country's GDP in 2011, the Central-East is the largest regional market for insulation materials with 45 percent of national demand. The Northwest and Southwest will post the fastest growth in insulation demand through 2016, each advancing at 10 percent annually.
Fiberglass insulation is offered in several different types, depending on the end use and energy efficiency requirements of a particular installation. Product types include batts, blankets, loose fill materials, rigid boards, and other forms. In weight terms, boards accounted for the largest share of fiberglass demand in 2011, with 46 percent of the total. Demand for rigid fiberglass board insulation products is forecast to increase 8.9 percent annually to 415,000 metric tons in 2016. Gains will benefit from continuing expenditures on nonresidential building, investment in the industrial sector, and output of durable manufactured goods.

Blanket insulation is produced in both rolls and batts (precut to specific lengths) in various densities, R-values, and widths. Batt products are available unfaced or with an attached vapor retarder, such as kraft paper, foil, or polyethylene, on one side. These products are used as insulation in industrial structures, such as petrochemical and metallurgy facilities, HVAC pipes, motor vehicles, ships, and homes.

Demand for fiberglass batts and blankets is projected to rise 8.3 percent per year to 370,000 metric tons in 2016. Gains will benefit from increasing expenditures on nonresidential building, investment in the industrial sector, and output of durable manufactured goods.

Other product forms include loose fill fibers, pipes, and textiles, which are widely used in construction, industrial equipment, and home appliance applications. Loose fill fibers are packed in bags for installation by pneumatic blowers, while spraying is an alternative application method. This segment will see the fastest growth through 2016 due to increasing applications in construction and other sectors.

**Table IV-2**

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Insulation Demand</td>
<td>1140</td>
<td>2400</td>
<td>5310</td>
<td>8000</td>
<td>11400</td>
</tr>
<tr>
<td>% foamed plastic</td>
<td>31.1</td>
<td>38.5</td>
<td>42.9</td>
<td>43.1</td>
<td>43.9</td>
</tr>
<tr>
<td>Foamed Plastic Insulation Demand</td>
<td>355</td>
<td>924</td>
<td>2280</td>
<td>3450</td>
<td>5000</td>
</tr>
<tr>
<td>Residential Building</td>
<td>107</td>
<td>223</td>
<td>611</td>
<td>920</td>
<td>1340</td>
</tr>
<tr>
<td>Nonresidential Building</td>
<td>86</td>
<td>188</td>
<td>480</td>
<td>725</td>
<td>1030</td>
</tr>
<tr>
<td>Industrial &amp; HVAC Equipment</td>
<td>46</td>
<td>146</td>
<td>349</td>
<td>525</td>
<td>755</td>
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<tr>
<td>Other</td>
<td>116</td>
<td>367</td>
<td>840</td>
<td>1280</td>
<td>1875</td>
</tr>
</tbody>
</table>

**Chart VI-1**

*Insulation Demand in China by Region, 2011 (41.9 billion yuan)*

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Sample Profile, Table & Forecast

COMPANY PROFILES

Chengdu HanJiang New Building Materials Company Limited
Qingbaijiang North New Economic Zone
No. 88 Fuxing Road
Chengdu, Sichuan 610305
China
86-28-8367-3195
http://www.cd-hanjiang.com

Annual Sales: ¥200 million [US$30 million] (estimated)
Employment: 1,000 (verified by company, 7/12)

Key Products: centrifugal glass wool insulation and composite fiber-glass wind pipe insulation products

Chengdu HanJiang New Building Materials manufactures glass wool insulation products. The Company is privately held.

The Company participates in the Chinese insulation market primarily through the manufacture of centrifugal glass wool insulation products, including centrifugal formaldehyde-free glass wool insulation, centrifugal glass wool board, centrifugal glass wool pipe, and centrifugal glass wool felt. Chengdu HanJiang New Building Materials’ centrifugal formaldehyde-free glass wool insulation, sold under the U-T brand name, features thermal, acoustical, and fire-resistant properties for use in transportation applications, office buildings, classrooms, movie theaters, and other areas. The Company’s centrifugal glass wool board, which is marketed under the JINGANG brand name, can be utilized in pipes, air conditioning systems, walls, partition walls, ceilings, and motor vehicles.

Centrifugal glass wool pipe insulation is engineered to resist the growth of mildew, mold, and bacteria. This insulation is suitable for use in interior and exterior applications. Chengdu HanJiang New Building

TABLE V-3
RESIDENTIAL BUILDING MARKET FOR INSULATION IN CHINA BY MATERIAL (million yuan)

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Building Construction (bil ¥)</td>
<td>610</td>
<td>1419</td>
<td>3885</td>
<td>7000</td>
<td>12000</td>
</tr>
<tr>
<td>¥ insulation/000¥ construction</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Residential Bldg Insulation Demand</td>
<td>1355</td>
<td>3295</td>
<td>8870</td>
<td>14350</td>
<td>21700</td>
</tr>
<tr>
<td>Foamed Plastics</td>
<td>1125</td>
<td>2800</td>
<td>7820</td>
<td>12450</td>
<td>18700</td>
</tr>
<tr>
<td>Polystyrene</td>
<td>975</td>
<td>2050</td>
<td>5350</td>
<td>7950</td>
<td>11100</td>
</tr>
<tr>
<td>Rigid Urethane</td>
<td>150</td>
<td>750</td>
<td>2450</td>
<td>4400</td>
<td>7350</td>
</tr>
<tr>
<td>Other</td>
<td>--</td>
<td>--</td>
<td>20</td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td>fiberglass</td>
<td>25</td>
<td>115</td>
<td>230</td>
<td>400</td>
<td>700</td>
</tr>
<tr>
<td>Mineral Wool</td>
<td>40</td>
<td>85</td>
<td>220</td>
<td>400</td>
<td>700</td>
</tr>
<tr>
<td>Other</td>
<td>165</td>
<td>295</td>
<td>600</td>
<td>1100</td>
<td>1600</td>
</tr>
<tr>
<td>% residential building</td>
<td>22.3</td>
<td>18.9</td>
<td>21.2</td>
<td>21.9</td>
<td>22.4</td>
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<tr>
<td>Total Insulation Demand</td>
<td>6075</td>
<td>17475</td>
<td>41870</td>
<td>65650</td>
<td>96950</td>
</tr>
</tbody>
</table>

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Other Studies

Siding
Demand for siding in the US is forecast to increase 7.1 percent annually to 103.5 million square in 2018, valued at $12.1 billion. Brick, concrete and stone siding will grow the fastest, driven by their durability and low maintenance, especially for new homes built in the South. Vinyl siding will remain dominant but will continue to lose market share. This study analyzes the 73.5 million square US siding industry, with forecasts for 2018 and 2023 by material, market and US region. The study also evaluates company market share and profiles industry participants.

#3144 ................ March 2014 ................ $5300

Insulation
US demand for insulation is projected to advance 7.6 percent annually to $10.3 billion in 2017. The residential market will see double-digit annual gains based on a strong rebound in housing starts. Fiberglass insulation will remain the market leader and grow the fastest, followed in growth rates by reflective/radiant and cellulose types. This study analyzes the $7.1 billion US insulation industry, with forecasts for 2017 and 2022 by product, market and US region. The study also evaluates company market share and profiles industry players.

#3109 ............... November 2013 ............... $5300

Roofing
US demand for roofing is projected to rise 3.5 percent annually to 268 million squares in 2017, valued at $27.2 billion. Asphalt shingles will remain the dominant product and will offer the best growth opportunities, to be outpaced only by the much smaller segments of roofing tile and other roofing materials. The West will lead gains by region. This study analyzes the 225.6 million square US roofing industry, with forecasts for 2017 and 2022 by product, market and region. The study also evaluates company market share and profiles industry players.

#3082 ............... September 2013 ............... $5300

Green Building Materials
US green building materials demand is forecast to increase 11 percent annually to $86.6 billion in 2017. Permeable pavement and structural products (e.g., recycled concrete, FSC-certified lumber) will grow the fastest. Exterior products such as energy-efficient windows and green roofing will remain the largest segment. This study analyzes the $51.8 billion US green building material industry, with forecasts for 2017 and 2022 by product, market and US region. The study also considers market environment factors and profiles industry participants.

#2995 ................ February 2013 ............... $5100

World Insulation
Global insulation demand is forecast to rise 5.5 percent annually to 23.1 billion square meters of R-1 value in 2016. The Asia/Pacific region will remain the largest and fastest growing market, followed by North America. The best growth opportunities will be found in foamed plastic and fiberglass insulation. This study analyzes the 17.7 billion square meter global insulation industry, with forecasts for 2016 and 2021 by material, market, world region and for 21 major countries. The study also evaluates company market share and profiles industry players.

#2956 ............... October 2012 ............... $6300

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