Roofing in China

Industry Study with Forecasts for 2012 & 2017

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Demand in China to grow 4.1% per year through 2012

Demand for roofing materials in China is forecast to rise 4.1 percent per annum to 2.7 billion square meters in 2012, valued at 70 billion yuan. Gains will be fueled by rising building construction expenditures in both new, and improvement and repair applications, benefiting from China’s ongoing urbanization and industrialization. However, a moderation in urban real estate markets and export sales will constrain building construction expenditures and industrial sector investment, respectively, restraining related roofing sales in the short term.

Elastomeric, plastic roofing to see best prospects

Elastomeric and plastic roofing will see the best prospects among the various roofing materials through 2012, increasing at annual rates in excess of six percent. Growth will derive from supportive government policies and increasing foreign investment, and these roofing materials will continue their inroads against built-up and asphalt roll roofing. However, concrete and clay tiles, and built-up and asphalt roll roofing will continue to account for the largest portion of roofing materials, representing 84 percent of total roofing demand in 2012.

Nonresidential building market in China to outpace residential segment

Roofing demand in the residential segment is expected to rise 3.2 percent annually to 1.5 billion square meters in 2012, trailing average roofing demand as a whole. Spending decreases in new housing construction due to falling house prices in major Chinese cities and a lack of credit for developers will constrain residential construction spending growth, thus dampening roofing gains. However, advances will be driven by China’s ongoing urbanization efforts and rising income levels, leading to improved living standards and better housing quality. In addition, China’s Flat-to-Slope Conversion Project will further fuel gains for residential roofing. This project, which is targeted mostly at residential apartment buildings, will continue to be implemented in major cities in China and improve both the building’s function and aesthetic appeal through converting flat roofs to sloped roofs. Demand for roofing in the nonresidential building market is forecast to increase 5.3 percent annually through 2012, benefiting from sustained government investment in institutional buildings and foreign investment in value added manufacturing facilities, as well as by the growing use of high-end products in many of these applications.
MARKETS

Reroofing

Reroofing demand for nonresidential buildings is forecast to increase at a 3.7 percent annual rate to 335 million square meters in 2012. Advances will be driven by continued efforts to upgrade existing stock and improve the energy efficiency of existing buildings, as well as national and regional initiatives to drive energy saving through the renovation of existing buildings. Despite the nation’s long history of building standards for energy efficiency, the presence of factors such as wind or water damage, or renovation of existing buildings, is also a major factor in the reroofing segment. The reroofing segment accounted for 32 percent of the nonresidential roofing market in 2007.

Although tile roofing has a long lifespan, most of these buildings have experienced prolonged exposure to wind and water damage, stimulating replacement or repair, thus contributing to the fast growth seen in this roofing material over the forecast period. Tile roofing ranks as the second leading material in the nonresidential building market and has a long history of use in China; it has maintained an important nonresidential reroofing material despite competition from new materials.

Elastomeric and plastic flexible membranes, prominent nonresidential reroofing materials for low-slope use, are expected to record faster growth through 2012 than conventional bituminous membrane systems (BUR and single-ply or multi-ply asphalt roll roofing). Owing to these flexible membranes’ less labor-intensive installation and better water-proofing effectiveness, these alternatives to built-up roofing or asphalt roll roofing have been able to increase market penetration.

Bituminous roofing was the dominant material used in nonresidential reroofing in 2007, with applications on low-slope or flat roofs for industrial, institutional, office and commercial buildings. Among steep-slope roofing materials, concrete and clay tiles accounted for the largest share of nonresidential reroofing in 2007.

Demand for new single family roofing products is projected to rise at a 3.5 percent annual rate to 603 million square meters in 2012. Advances will benefit from new home construction activity and government efforts to increase average living space per housing unit, which will lead to larger roof areas and greater demand for roofing materials. Moreover, demand for more square meters of roofing per housing unit will also profit from trends toward more steeply pitched roofs and more hip-and-ridge elements in roofs on single family homes ...

--Section IV, pg. 120
Sample Profile, Table & Forecast

COMPANY PROFILES

Beijing Oriental Yuhong Waterproof Technology Company Limited
No. 4 Building, Kang Jiayuan, Gao Beidian North Road
Chaoyang District, Beijing 100123
China
86-10-5903-1915
http://www.yuhong.com.cn

Annual Sales:
¥484 million [US$65 million](verify by company, 12/08)

Employment:

over 760 (verified by the company, 12/08)

Key Products:

- styrene-butadiene-styrene-modified bitumen and atactic polypropylene-modified bitumen roofing membranes

- coatings, patching and repair compounds, joint sealers and other waterproofing products

International Contact:

Jing Li, Intl. Dept. General, 86-10-59031916

Beijing Oriental Yuhong Waterproof Technology Company Limited makes and sells roofing membranes, coatings, repair compounds and other materials for the building and construction industry. The Company is privately held.

The Company is involved in the Chinese roofing industry through the manufacture and sale of such products as YUHONG atactic polypropylene (APP) modified bitumen and styrene-butadiene-styrene (SBS)-modified bitumen roofing membranes. Beijing Oriental also makes coatings, patching and repair compounds, joint sealers and other waterproofing products that can be used in roofing systems and other applications. These materials are made from bitumen, rubber, acrylic, polyurethane and epoxy compounds.

YUHONG APP modified bitumen roofing membranes consist of spunbond polyester felts coated with multiple layers of APP modified bitumen. These membranes can be coated on one or both sides with

<table>
<thead>
<tr>
<th>TABLE III-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOFING DEMAND IN CHINA BY PRODUCT</td>
</tr>
<tr>
<td>Building Construct Expend (bil 2006¥)</td>
</tr>
<tr>
<td>sq m roofing/000¥ construction</td>
</tr>
<tr>
<td>Roofing Demand</td>
</tr>
<tr>
<td>Tile</td>
</tr>
<tr>
<td>Bituminous</td>
</tr>
<tr>
<td>Metal</td>
</tr>
<tr>
<td>Elastomeric</td>
</tr>
<tr>
<td>Plastic</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>¥/square meter</td>
</tr>
<tr>
<td>Roofing Demand (bil ¥)</td>
</tr>
</tbody>
</table>

CHART V-1

ROOFING DEMAND IN CHINA BY REGION, 2007
(2.2 billion square meters)

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