World Refractories

Industry Study with Forecasts for 2014 & 2019

Study #2734 | March 2011 | $5900 | 371 pages
# Table of Contents

## EXECUTIVE SUMMARY

## MARKET ENVIRONMENT

General .................................................. 4
World Macroeconomic Overview ............. 5
Recent Historical Trends ..................... 5
World Economic Outlook ....................... 7
World Fixed Investment Trends .............. 11
World Manufacturing Output ................. 13
World Crude Steel Production .............. 15
World Flat Glass Production ............... 17
World Cement Production ..................... 19
Pricing Trends ..................................... 21
Technology ......................................... 23
  Basic Refractory Properties ............... 25
  Refractory Shapes & Forms ................ 27
  Refractory Materials .......................... 28
  Other Technological Developments ....... 30

## OVERVIEW

Overall ............................................. 31
World Refractory Demand ..................... 32
  Demand by Market .............................. 36
  Iron & Steel ..................................... 36
  Steelmaking Technology ...................... 38
  Steel Refractory Producers & Products .... 40
  Other Metals .................................... 41
  Nonmetallic Minerals .......................... 43
  Other ............................................ 46
  Demand by Form & Material ................ 47
World Refractory Production ............... 50
International Trade Flows ................. 52

## NORTH AMERICA

General ............................................. 54
  Refractory Supply & Demand ............... 55
  Refractory Outlook & Suppliers .......... 56
United States ..................................... 58
  Canada ......................................... 64
  Mexico ......................................... 69

## WESTERN EUROPE

General ............................................. 75
  Refractory Supply & Demand ............... 76
  Refractory Outlook & Suppliers .......... 78
  Germany ....................................... 80
  Italy .......................................... 84
  Spain ......................................... 89
  France ........................................ 94
  United Kingdom .............................. 99
  Belgium ...................................... 104

## ASIA/PACIFIC

Austria .......................................... 108
Other Western Europe ......................... 113

## OTHER REGIONS

Central & South America .................... 163
Brazil ............................................. 167
Other Central & South America .......... 172
Eastern Europe ................................ 177
Russia .......................................... 182
Ukraine .......................................... 187
Poland .......................................... 192
Other Eastern Europe ......................... 197
Africa/Mideast ................................ 202
  Turkey ........................................ 207
  Iran ......................................... 212
  South Africa ................................. 217
  Other Africa/Mideast ...................... 222

## INDUSTRY STRUCTURE

General ............................................. 228
Market Share ..................................... 231
  Leading Refractory Producers .......... 231
  Leading Raw Material Suppliers ........ 234
Product Development & Manufacturing .... 235
  Marketing & Distribution ................. 238
  Financial Issues & Requirements ....... 240
  Cooperative Agreements ................. 241
  Mergers, Acquisitions & Industry Restructuring ...................... 246

## COMPANY PROFILES

Alcoa Incorporated .............................. 250
Allied Mineral Products ..................... 251
Almatis GmbH .................................. 254
AluChem Incorporated ......................... 257
ANH Refractories ............................... 258
Bosai Minerals Group ......................... 263
BURTON GmbH .................................. 264
Calucem GmbH .................................. 266
China GengSheng Minerals .................. 268
Chosun Refractories ......................... 270

## List of Tables/Charts

### EXECUTIVE SUMMARY
1 Summary Table ................................ 3

### MARKET ENVIRONMENT
1 World Gross Domestic Product by Region 11
2 World Gross Fixed Investment by Region 13
3 World Manufacturing Value Added by Region 15
4 World Crude Steel Production by Region 17
5 World Flat Glass Production by Region 19
6 World Cement Production by Region 20

(continued on following page)
List of Tables/Charts

(continued from previous page)

7 Selected Refractory Pricing ..................................22
Cht Melting Points of Industrial Minerals & Refractories ...........26

OVERVIEW

1 World Refractory Volume
   Demand by Region .........................................33
Cht World Refractory Demand
   by Region, 2009 ...........................................34
2 World Refractory Value Demand by Region 35
3 World Refractory Demand by Market ..................36
4 World Iron & Steel Refractory
   Demand by Region .........................................37
5 World Other Metals Refractory
   Demand by Region ...........................................43
6 World Nonmetallic Minerals Refractory
   Demand by Region .........................................45
7 World Other Markets Refractory
   Demand by Region ...........................................47
8 World Refractory Demand
   by Form & Material .........................................50
9 World Refractory Production by Region .......51
Cht World Refractory Production
   by Region, 2009 ...........................................52
10 World Refractory Net Exports by Region ....53

ASIA/PACIFIC

1 Asia/Pacific: Refractory
   Supply & Demand ...........................................122
2 Asia/Pacific: Refractory Demand
   by Form, Material & Market ..........................124
3 China: Refractory Supply & Demand ..........128
4 China: Refractory Demand
   by Type, Material & Market ..............................142
5 India: Refractory Supply & Demand ..........134
6 India: Refractory Demand
   by Form, Material & Market ..............................136
7 Japan: Refractory Supply & Demand ..........140
8 Japan: Refractory Demand
   by Form, Material & Market ..............................142
9 South Korea: Refractory
   Supply & Demand ...........................................145
10 South Korea: Refractory Demand
   by Form, Material & Market ..............................147
11 Taiwan: Refractory Supply & Demand .......150
12 Taiwan: Refractory Demand
   by Form, Material & Market ..............................152
13 Australia: Refractory Supply & Demand .. 155
14 Australia: Refractory Demand
   by Form, Material & Market ..............................157
15 Other Asia/Pacific: Refractory
   Supply & Demand ...........................................160
16 Other Asia/Pacific: Refractory Demand
   by Form, Material & Market ..............................162

OTHER REGIONS

1 Central & South America: Refractory
   Supply & Demand ...........................................165
2 Central & South America: Refractory Demand by Form, Material & Market......167
3 Brazil: Refractory Supply & Demand ...... 170
4 Brazil: Refractory Demand by Form, Material & Market ..............................172
5 Other Central & South America: Refractory
   Supply & Demand ...........................................175
6 Other Central & South America: Refractory Demand by Form, Material & Market......177
7 Eastern Europe: Refractory
   Supply & Demand ...........................................180
8 Eastern Europe: Refractory Demand by Form, Material & Market ..............................182
9 Russia: Refractory Supply & Demand ...... 185
10 Russia: Refractory Demand by Form, Material & Market ..............................187
11 Ukraine: Refractory Supply & Demand .... 190
12 Ukraine: Refractory Demand by Form, Material & Market ..............................192
13 Poland: Refractory Supply & Demand .......195
14 Poland: Refractory Demand by Form, Material & Market ..............................197
15 Other Eastern Europe: Refractory
   Supply & Demand ...........................................200
16 Other Eastern Europe: Refractory Demand by Form, Material & Market......202
17 Africa/Mideast: Refractory
   Supply & Demand ...........................................205
18 Africa/Mideast: Refractory Demand by Form, Material & Market ..............................207
19 Turkey: Refractory Supply & Demand .......210
20 Turkey: Refractory Demand by Form, Material & Market ..............................212
21 Iran: Refractory Supply & Demand .........215
22 Iran: Refractory Demand by Form, Material & Market ..............................217
23 South Africa: Refractory
   Supply & Demand ...........................................220
24 South Africa: Refractory Demand by Form, Material & Market ..............................222
25 Other Africa/Mideast: Refractory
   Supply & Demand ...........................................225
26 Other Africa/Mideast: Refractory Demand by Form, Material & Market .......227

INDUSTRY STRUCTURE

1 Finished Refractory Sales by Firm, 2009 ..........230
Cht World Refractory Market Share
   by Company, 2009 ...........................................231
2 Selected Cooperative Agreements ..............244
3 Selected Acquisitions & Divestitures ..........248
China will remain the largest national market and continue to comprise the majority of global demand. Above-average growth will also occur in India due to solid gains in fixed investment.

World demand to rise 5.3% annually through 2014

Global demand for refractories is projected to rise 5.3 percent per year through 2014 to 40.7 million metric tons. China will remain the largest national market and continue to comprise the majority of global demand. Above-average growth will also occur in India due to solid gains in fixed investment expenditures. Suppliers will benefit from an improvement in the key US market, which will rebound from dismal levels in 2009.

In value terms, demand will rise 7.0 percent annually through 2014, reaching $33.1 billion. Advances in value terms will be stronger than in volume terms, reflecting improving refractory technologies. These technologies have, in effect, lowered refractory consumption per unit of output in virtually all refractory-consuming industries, especially in steel, thereby limiting tonnage gains, but supporting value gains through higher prices. Refractory prices have also been impacted by raw material costs, and will continue to be a challenge to refractory producers, especially those in Europe and the Western Hemisphere.

The world refractory industry has been negatively affected in recent years by a slowdown in steel and iron output. Given the refractory-intensiveness of ferrous metal production processes, coupled with the fact that this sector typically accounts for about three-fifths of the volume of refractories consumed, refractory producers contended with sluggish demand for their products in 2009. Markets most affected were the developed areas such as the US, Western Europe and Japan.

Iron, steel market to have strongest gains in demand

Despite declines in the amount of units needed per ton of steel produced, iron and steel will have the strongest gains of any market through 2014 due to rising steel production. Demand for refractories used in the production of other metals will rise, benefiting from increased output of materials such as aluminum. Gains are also expected in the nonmetallic mineral products market, spurred by growth in the production of ceramics, cement and other mineral products, fueling demand for associated refractories. Other markets, including petroleum, chemicals, paper and aerospace, will benefit from rising production by end users.

Monolithic refractories to outpace bricks and shapes

Among refractory forms, demand gains for bricks and shapes are expected to lag those for monolithics. Monolithics are projected to grow at an above-average pace, as the use of these products provides an economic advantage by extending the interval between brick relinings.
Asia/Pacific

Nonmetallic Minerals -- Demand for refractories in nonmetallic minerals applications is forecast to grow 4.7 percent annually through 2014, reaching 7.6 million metric tons. These gains will lag the 2004-2009 pace due to the use of more advanced and better performing refractories in ceramics and glass. However, solid growth in nonmetallic mineral product shipments will create opportunities. For example, will outpace gains experienced during the 2004-2009 period. Nonmetallic mineral products include ceramics, glass, cement, lime and other minerals. The manufacture of nonmetallic mineral products employs melting and firing processes that involve extremely high temperatures. Moreover, significant mechanical stresses and exposure to hazardous chemicals are also characteristic of many such operations. Given these production conditions, refractories are utilized extensively in this segment.

Refractories are utilized in ceramics-related applications such as heat-resistant materials in kilns and driers to produce abrasives, ceramic electronic components (e.g., capacitors, ferrite cores and semiconductor substrates), dinnerware, electric insulators, sanitary or whiteware (e.g., toilets and sinks), sewage/drainage/irrigation pipe, structural brick and tile, technical or advanced ceramics, and refractory products themselves. Refractories used in the firing of ceramics must be able to withstand fuel ash corrosion, high temperatures, and slag attack from vapors and sulfur. Trends toward higher operating temperatures and faster firing cycles are increasing demand for refractories with better heat insulating properties, refactoriness and spalling resistance. This accounts for the use of such extremely high heat-resistant materials as silicon carbide in refractory applications in the ceramics industry. Nonetheless, a range of other materials can also be used, especially for outer areas of the kiln, which do not come into contact with the material being fired or the vapors from the firing process. Examples of such products include fused...
Sample Profile, Table & Forecast

COMPANY PROFILES

Puyang Refractories Group Company Limited
Middle West Circle Road
Puyang, Henan 457100
China
86-393-3214-015
http://www.punai.com

Annual Sales: $160 million (2009)
Employment: 3,505 (2009)

Key Products: Castables, bricks, mortars, gun mixes & other refractories

Puyang Refractories Group Company Limited produces, manufactures, and sells refractory materials, functional refractory materials, and related products primarily for the iron and steel industries. The company also conducts refractory designing, installation, and construction activities.

The company participates in the world refractory industry through the production of castables and other refractories for use in tundish, ladle, electrical arc furnace, blast furnace, industrial furnace, hot metal mixer, aluminum cell, nonferrous, converter, electrical, casting, anode furnace and other applications. Among these products are self-flow, lightweight insulating, clay, corundum-chrome and low-cement castables; clay insulating firebricks; expanded perlite heat-insulating, magnesium oxide-carbon, nitride-bonded silicon carbide abrasive, and alumina bricks; clay mortars; gun mixes for electric arc furnaces and converters; tundish dry vibration mixes; and alumina carbon silica ramming mixes.

Manufacturing and marketing operations for Puyang Refractories are conducted through five subsidiaries: PRCO Yingkou Magnesia

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