THE IMPORTANCE OF RAW MATERIALS FOR THE EUROPEAN REFRACTORY INDUSTRY

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PRE – a member of Cerame-Unie

**Turnover per sector**

- Wall & Floor Tiles
- Bricks & Roof Tiles
- Refractories
- Tableware
- Abrasives
- Technical Ceramics
- Sanitaryware
- Clay Pipes

Ceramic industry (2008): 31 billion € turnover
Refractory industry (2008): 5.1 billion € turnover

*Source EUROSTAT*
PRE membership

12 National associations (representing 17 countries)

4 Direct members (Multinational groups):
- Calderys
- Magnesita
- Refratechnik
- Vesuvius
Vesuvius is a global refractory company

Present in 33 countries
providing consumable products to the steel, foundry, glass and photovoltaic industries

Involving 12 000 employees of 50 nationalities
With the aim to be local in each country

Revenue 1,6 billion €

20 plants and 4500 employees in Europe

Headquarters in Brussels
The refractory supply chain

Refactory material flowchart from mine to industry customer (example magnesia)

Mine

Magnesite mine

Sinter plant

Rotary kiln for Dead Burned Magnesia

Magnesia bricks & shapes

Magnesia monolithics (packed)

Refractory product

Industry

Steel

Cement

Copper

Glass
Refractory: a 20 billion € world market

Depending on few raw materials

- **Basic bricks**
  - Magnesite
  - Dolomite
  - Graphite

- **Basic Monolithics**
  - Magnesite

- **AISI bricks**
  - Bauxite
  - Fireclay

- **AISI Monolithics**
  - Bauxite

- **Specialities**
  - Zircon
  - Silicon Carbide
  - Graphite
The refractory industry is strategic for EU

**The refractories industry is of strategic importance**

Without refractories, there would be no materials industry
no steel, no glass, no cement, no aluminium, no building bricks, no porcelain,

The industry is **highly exposed to international competition**

Exports 40% of production
Imports 20% of consumption (mainly from China)

Applications are 60% in metallurgy
Raw materials are of primordial importance for the refractories industry. Availability of quality materials and security of supply are the main topics.

- Raw materials account for some **60% of the cost of refractories** products
- Raw materials have a major **influence on the quality** of the finished products
- The refractories industry relies heavily on **imports**.
  - More than 2/3 of the refractory raw materials consumed in EU are imported
    - Bauxite: 100%
    - Graphite 100%
    - Zircon 100%
    - Magnesite 60%
Main sources of refractory raw materials are in China
Raw materials prices rose dramatically in the last three years.
...mostly due to restrictive trade practices

China is globally the most important supplier of refractory raw materials, but China's policy for export of raw materials is unfair:

- Exports of raw materials are **heavily taxed and/or limited**.
- Example:
  - the total quantity of magnesia available for export is limited and reduced annually
  - export licenses are auctioned to selected domestic bidders who resell them with 30% mark up
  - 17% output value added tax
  - export tax on top: magnesia 10% - bauxite 15% - graphite 20% (not WTO conform) with a minimum in value

- None of these costs are borne by Chinese domestic producers, and exports of bricks by domestic producers are not taxed
  - unfair cost advantage of 30% for Chinese brick producers on non Chinese markets
Magnesia prices are now twice as high in the EU than in China

Magnesia prices have increased by 70% in China and by 150% in Europe from 2002 to 2008 (135% excluding freight). Due to licensing and taxation of exported raw materials, Chinese domestic producers of bricks have a cost advantage in international markets of approximately 30%.
PRE recommandations for an action plan

- Improve knowledge base on European mineral sources
- Elaborate national land use planning policy
- Support research and development of alternative sources
- Pursue WTO dispute settlement
- Create sub-group of Raw Materials Supply Group including representation from the ceramic refractory industry
As a conclusion

- Refractories are critical for the EU steel, cement and glass industries
- EU companies are leading the world refractory industry

However

- Refractories are highly dependant on imported raw materials, mostly from China
- Raw material prices have increased dramatically over the last years due to unfair trade practices

Rapid action should be taken to sustain fair trade practices
Thank you for your attention