



CERAGLASS INDIA 2010

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Conference on 'Ceramics and Glass Raw Material from Rajasthan'

Saturday, 13 November 2010: EPIP, Sitapura, Jaipur

Summary

	Inaugural Session
Issues Deliberated	<ul style="list-style-type: none"> • Availability of ceramic and glass mineral raw material • Rich raw material to build Ceramic Industry • Quantitative inputs for Glass Industry: Indian & International experiences
Key Speakers/ Panelists	<ul style="list-style-type: none"> • Mr L K Maheshwari, Chief General Manager, RIICO • Mr S N Eisenhower, Director-Operations, Saint – Gobain Glass India Ltd. • Dr H S Maiti, Senior Advisor, CSIR • Mr Vikram Golcha, Past Chairman, CII Rajasthan State Council & Managing Director, Associated Soapstone Distributing Co Pvt Ltd.
Highlights	<p>Mr L K Maheshwari, Chief General Manager, RIICO focused on the strong position that Rajasthan occupies in terms of abundant availability of ceramic and glass mineral raw materials. The State is the sole producer of jasper and wollastonite and a leading producer of silica sand, soapstone, ball clay, china clay, calcite, feldspar, natural gypsum, kaolin, rock phosphate, ochre etc, he said. Till March 2008, the State had received an investment of Rs 5,000 crores in the Ceramic and Glass Industry and its allied products. About 1500 processing units were in the state in both the organized and unorganized sector. He also elaborated on the efforts made by the state and central governments to fully utilize this immense potential in terms of mineral wealth of Rajasthan. A dedicated zone has been embarked at Gilot where piped natural gas would be provided to reduce production costs and the state government was fully committed to lead this industry to further growth.</p> <p>Dr H S Maiti, Senior Advisor, CSIR said that the natural resources are limited and could not be replenished. The need of the hour is to use them judiciously so they were available to the generations to come. He advocated the use of latest techniques and machinery in mining, processing of raw minerals and production. He explained about the advantages of using Hydro Cyclone, High intensity wet magnetic separator</p>

	<p>etc for better productivity along with an environment friendly approach. Dr Maiti also talked about the competition the industry faced from abroad and he suggested that to counter this there should be constant upgradation of technology along with constant communication between mine owners, processors of these minerals coupled with strong interaction with technical institutions like CGRI and others for developing a strong competitive edge. He also spoke about the need to develop singular clay and advocated a cluster approach.</p> <p>Mr S N Eisenhower, Director-Operations, Saint – Gobain Glass India Ltd said that silica sand, which is a major constituent of glass, is present in abundance in Rajasthan and nearly 80% of the raw material for making glass is present in the state. If proper value addition is done to this raw material, the State could become a hub for this industry not only in India but also in the world in the near future. He also spoke about responsible mining by taking due care of environmental concerns and support of the government in this endeavor.</p> <p>Mr Vikram Golcha, Past Chairman, CII Rajasthan State Council & Managing Director, Associated Soapstone Distributing Co Pvt Ltd urged the industry to not only achieve higher productivity but also fulfill its responsibility towards the environment. He said it was amazing to note that some minerals whose deposits were present in Rajasthan were still being imported from overseas. He also spoke about the optimism CeraGlass had generated and with good government support the industry was bound to take a big leap forward in the coming future, particularly in Rajasthan.</p>
Key Takeaways	<ul style="list-style-type: none"> • There is a abundant availability of ceramic and glass mineral raw material in Rajasthan. • The need of the hour is to use raw material in a judicious manner so they were available to the future generations. • If proper value addition is done to raw material, the State could become a hub for ceramic and glass industry not only in India but also in the world in the near future. • The industry should look at both achieving higher productivity and also fulfill its responsibility towards the environment.
	<p>Session 1 – Raw Material & Mining for Ceramics & Glass Sector</p>
Issues Deliberated	<ul style="list-style-type: none"> • Rajasthan as the raw material hub – Overview & Potential • Availability of ceramic grade minerals in Rajasthan • Technological/advance solution – New approaches for product manufacturers • Glass manufacturers – End user’s perspective
Key Speakers/ Panelists	<ul style="list-style-type: none"> • Dr Shishir Sharma, Head Geology Deptt. Dungar College, Bikaner • Mr V K Sood, VP – Projects, Wolkem India Limited • Mr Kamal Aggarwal, Director, Bharat Potteries Ltd

	<ul style="list-style-type: none"> • Mr Shailesh Ranjan, Product Manager, Asahi Glass India
Highlights	<p>Dr Shisher Sharma Chaired the Panel Discussion. He said the state has a great potential in ceramic raw material. Further, he added that the state of Rajasthan is blessed with geologically and economically unique industrial minerals and rocks. Some of these resources are of national importance such as amphibole asbestos, ball clays, bentonite, china clay, fireclay, fuller’s earth, calcite, dolomite, feldspar, fluorspar, etc. and play an important role in economic sustenance of the people of the state and the country. He said that the state is the second largest producer of glass and ceramic raw materials, clay and silica and the leading producer of feldspar in the country and the only Rajasthan is the only wollastonite producing state in India. He also said that the ceramic industry is about 100 years old and has witnessed fast growth in demand primarily due to growth in construction and housing sector.</p> <p>Mr V K Sood spoke on the availability of ceramic grade minerals in Rajasthan. He said Rajasthan holds a major proportion of minerals used in ceramic industry including Talc hydrous magnesium silicate. Deposits in Rajasthan are located in Udaipur, Bhilwara, Dung Dungar-pur, Sawai madhopur, Pali and Jaipur districts. Indian reserves are estimated at 312 million MT. Rajasthan reserves account for 157 million MT. The other important minerals such as feldspar, Calcite, wollastonite, ball clay, china clay are all available in the state and spread over 40 districts.</p> <p>Mr Kamal Aggarwal, expressed his views technological and advanced solutions to determine new approaches for product manufacturers. He said processing ceramics and glass involves four of Nature’s elements, namely EARTH, AIR, WATER AND FIRE. Global warming is a key concern , together with the rapid depletion of our fossil fuels. Therefore the priority should be to adopt the latest technology and firing procedures to minimise fuel consumption in kilns and dryers. The control and recycling of hot gases to protect the environment and save on cost in necessary. Energy auditing and the optimal utilisation of power reduces the wastage factor, and in true Indian fashion we can say “one Rupee saved is one Rupee earned”.</p> <p>Rain water harvesting and the recycling of water wherever feasible is another priority. He also emphasized on the need to ensure a wider industrial use of professionally-designed equipment to control both dust and air pollution.</p> <p>Mr Shailesh Ranjan, on “Glass – End User Perspective” covering the impact of glazing on the energy consumption of a building and glass properties, performance and processability. He gave energy saving tips including the selection of right building material which may have higher cost at beginning but higher saving in terms of energy conservation. He said, glass is becoming an integral part of any building, hence selecting suitable glass will make lot of impact in building energy performance and Indian climatic condition focuses more on cooling requirement rather than</p>

	heating requirement.
Key Takeaways	<ul style="list-style-type: none"> • The ceramic industry is century old and has witnessed fast growth in demand primarily due to growth in construction and housing sector. • All important minerals such as feldspar, Calcite, wollastonite, ball clay, china clay are all available in the state and spread over 40 districts. • The priority should be to adopt the latest technology firing procedures to minimize fuel consumption in kilns and dryers.
	Session 2 – Technological developments & Best Practices: Domestic and International
Issues Deliberated	<ul style="list-style-type: none"> • Opportunities & Challenges of mining in Rajasthan • Ceramics & Glass Raw materials from Rajasthan – Beneficiation • China Clay • Mineral powder characterization for value addition
Key Speakers/ Panelists	<ul style="list-style-type: none"> • Mr Akshaydeep Mathur, President, FMAR • Er A K Gupta, Ex-Head, Ceramics Engineering, College of Engineering & Technology and Former, Ex. Dy. Scientist in-charge. CGCRI, Khurja • Mr Antariksh Modi, Managing Director, Shri Modi Levigated Kaolin (P) Ltd • Prof BN Pitchumani, Particle Science & Technology, Department of Chemical Engineering IIT, New Delhi
Highlights	<p>Mr Akshaydeep Mathur started the discussion by imparting that Rajasthan is a mineral rich province. The state has 79 types of minerals and 58 types are commercially produced. He said Rajasthan is the biggest producer of important raw material used in the ceramic and glass industry such as china china clay, silica sand, Quartz, feldspar etc. He said the challenges of mining in rajasthan is the Myth that the Aravalli Hill Range is eco-fragile like the Himalayas and mining in this area will create gaps through which the thar desert will march into the indo-Gangetic Plains. The reason of this myth is the report submitted by Planning Commission in 1952 and reported that Thar desert has been advancing at a rate of 0.8kms /year for the last 50 years. The other reasons are Legal Framework, Lengthy Clearance procedures, Unending Delay in final orders by Court, Anti development lobbies, Anti Social elements - Mining without Lease, Local Issues etc.</p> <p>Er A K Gupta shared his views on Ceramics & Glass raw-materials of Rajasthan – Beneficiation. He talked on three important aspects a) why the technologies are not being adopted by entrepreneurs b) what Technologies should be adopted c) Technical roadmap for adaptation.</p> <p>He said the global investment for raw material exploration is US \$ 10 billion by 2007 whereas, India spend only 0.5 per cent. He said the growth of Industrial Sector is much more than in Mining sector, Raw-Materials being the backbone of Industries, It must be other way around and Indian</p>

	<p>spending on exploration should be 4.5% of Global Spending. He also suggested that the Beneficiation of the ceramic & Glass raw-materials for high value Applied & Advanced ceramics should be taken up first in comparison to low cost traditional ceramics. He explained the various reasons of non-adoptability of the beneficiation technologies such as Adoption of Short cut / low cost methods. To earn short term profit. Awareness of Cost analysis of beneficiation. Lack of Technological knowledge, Coordination gap between the mine owner and machinery manufacturers. Communication gap of old / new Beneficiation Technologies between R & D Institutions and the Industries. Due consideration of techno-economic key-points in finalization of taxes, royalties etc. at par to the same in business countries.</p> <p>Mr Antariksh Modi, explained the role of china clay in ceramics and other allied industries. He said the China Clay, also known as Kaolin, is one of the most essential raw materials for the manufacture of ceramic products which accounts for about 35% of the total China Clay consumption in the country. Refractory industry consumes a handsome amount of China Clay, while the remainder is used in rubber, cement and insecticides, textile, etc. industries. All industries except refractory, cement and insecticides consume washed China Clay. He said the principal China Clay producing states in India, are Rajasthan, West Bengal, Kerala, Delhi, Gujarat, Bihar and Andhra Pradesh which together accounted for 90% of total production. He said keeping in view the increasing demand of China Clay in diverse industries and the necessity of matching the quality of output from Tatera mines with that of Indian standards, special emphasis has been laid on mechanization of mines and use of sophisticated devices to get maximum production and least wastage in beneficiation. At the end he said that, the future of China Clay industry bright and promising.</p> <p>Prof BN Pitchumani spoke on “Mineral Powder Characterization for Value addition”. He recommended number of ways for value addition to minerals such as enriching the low grade minerals, producing ultrafine particles, improving the flowability of the powder, designing the powder particles for desired application, producing narrow size distribution powder etc. He also said that there is a need for Research and development in large industries. He suggested a) R&D center at places of large mineral deposit b) Consortium of industry and institutions with facilities for R&D c) Industry and Institution interaction d) Use of large workforce (students) with summer projects, graduate and post graduate projects on specific problems in industry.</p>
Key Takeaways	<ul style="list-style-type: none"> • The challenges of mining in Rajasthan is the Myth that the Aravalli Hill Range is eco-fragile like the Himalayas and mining in this area will create gaps through which the Thar desert will march into the indo-Gangetic Plains. • Beneficiation of the ceramic & Glass raw-materials for high value Applied & Advanced ceramics should be taken up first in comparison to low cost traditional ceramics.

	<ul style="list-style-type: none"> • Special emphasis should be laid on mechanization of mines and use of sophisticated devices to get maximum production and least wastage in beneficiation. • There is need for Research and development in large industries for value addition.
	<p>Session 2 – Government policies & incentives for ceramic & Glass Industries</p>
Issues Deliberated	<ul style="list-style-type: none"> • Investment Opportunities in Rajasthan • Dry Milling • Wet Milling • Application of XRF in mineral characterization
Key Speakers/ Panelists	<ul style="list-style-type: none"> • Mr Rajendra Bhanawat, Managing Director, RIICO • Mr Bernhard Renner, Regional Manager – Asia & Asia Pacific Netzch Condux, Germany • Mr Anton Benjamin, General Manager India Operations Netzch Technologies India Pvt. Ltd. • Dr B N Srivastava, PANalytical Instruments Limited
Highlights	<p>Mr Rajendra Bhanawat said Rajasthan is one of the leading investment destinations in India because of peaceful environment, better law & order situation, better power availability, excellent infrastructure. Piped Natural Gas will also be made available by end 2010 within the state which will encourage more investment in the Ceramic, Glass & Allied sectors. The 40% of the proposed Delhi-Mumbai Freight Corridor (DMFC) (approx 600 Kms) will pass through the State of Rajasthan. This will provide excellent logistic and transportation infrastructure and the proximity to Delhi.</p> <p>Mr Bernhard Renner spoke about the jet mill technology and its advantages. He said that in jet mill one can grind a friable or crystalline material in small size and classify in a very narrow particle size. There are no moving parts to wear out or generate heat in a jet mill and no screens to plug or be punctured. There is no attritional heat because of the cooling effect of the jets. He said that the basic concept is reduction of the jet energy to a necessary minimum, use of thermal energy resulting from gas compression and use of more efficient compressor technology.</p> <p>Mr Anton Benjamin talked about the Wet Grinding & Dispersing Application in Ceramics and Mineral processing. He also gave the details of the various Grinding mills such as Horizontal Disc Mill – LME - High Energy Circulation Mill – ZETA (LMZ) and - Vertical Agitator Bead Mills.</p> <p>Dr B N Srivastava spoke on “Analysis of ceramics and glass by energy-dispersive x-ray fluorescence spectrometer”. ED-XRF is a tool to investigate the chemical composition in ceramics & glass. He said that Ceramics & Glass are refractory solid in nature and very difficult to bring</p>

	<p>them in solution. Therefore, most of the analytical techniques are not suitable for their quick analysis. X-ray fluorescence technique is most suitable for such type of analysis.</p>
Key Takeaways	<ul style="list-style-type: none"> • Rajasthan is one of the leading investment destinations in India because of peaceful environment, better law & order situation, better power availability, excellent infrastructure. • Ceramics & Glass are refractory in solid nature and very difficult to bring them in solution form. So X-ray fluorescence technique is most suitable for their analysis.
Participants	<p>The session was well attended by over 125 representatives, comprising CEOs and senior executives from industry, Academia, importers & exporters, and policy makers across the country as well as abroad.</p>