



CERAGLASS INDIA 2010

An International Trade Fair & Conference on Ceramics, Glass & Allied Products

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International Conference on Advanced Ceramics for Tomorrow

Thursday, 11 November 2010: EPIP, Sitapura, Jaipur

Session Summary

	Inaugural Session
Issues Deliberated	<ul style="list-style-type: none"> • Overview of the Industry • Various application of technical Ceramics • Glass and Ceramics with new functionalities
Key Speakers/ Panelists	<ul style="list-style-type: none"> • Mr. Shreekant Somany, Chairman, CII CeraGlass India 2010 & Chairman and Managing Director Somany Ceramics Ltd. • Dr Indranil Manna, Director, CGCRI • Dr H S Maiti, Senior Adviser, CSIR • Mr Kamal Aggarwal, Managing Director, Bharat Potteries Ltd.
Highlights	<p>Mr Shreekant Somany, Chairman, CII CeraGlass India 2010 & Chairman and Managing Director Somany Ceramics Ltd, started the Conference with a Welcome Remark. He said that, the demand of ceramic and glass products is growing globally. 90 percent of the total demand for advanced ceramic materials comes from electronic goods and allied industries primarily for their property of inertness to extreme environmental conditions. A niche market called "bio-ceramics" is coming up rapidly with applications in prosthetic devices, bone transplants and pace makers. However, India has not got a strong hold in this segment.</p> <p>Other important segments for advanced ceramics for India are automotives and mobile phones as these industries are large and growing very rapidly.</p> <p>Overall we only produce 5000 tonnes per annum of advanced ceramics out of total world production of 500,000 tonnes.</p> <p>Dr Indranil Manna, Director, CGCRI pointed out, advanced ceramics (engineering ceramics) are manufactured with highly refined and specially prepared raw materials using sophisticated technology. The</p>

	<p>inputs for producing this variety are not naturally occurring minerals but those that have already undergone chemical transformation and refinement, prior to their use in a ceramic production.</p> <p>Advanced ceramics find relevance in wide variety of products Bioceramics : human bone detection; Electroceramics : Sensors , mobile chargers ; fuel cells, solar cells, in refractory to attain high temperature, prevention of chemical attack, in lasers : glasses which are transparent to one particular wavelength, bullet proof glasses. He also emphasized on the importance of energy and said that the next world war will be on energy issues. Therefore there is need to utilize renewable sources or non conventional sources of energy</p> <p>Dr H S Maiti, Senior Adviser, CSIR stated that the Council of Scientific and Industrial Research, CSIR, has several laboratories across the country to conduct research in various fields of advanced ceramics and we are contributing to various civilian and strategic research. He emphasized that India has been growing at a very rapid pace but is lagging behind in innovative research. He sought the support of the industries under the guidance of CII in bringing the technology from the laboratories to the industries.</p> <p>Mr Kamal Aggarwal, Managing Director, Bharat Potteries Ltd said, Advanced ceramics market has been witnessing growth in both traditional and new application areas. Technology innovations have over the years helped make performance and productivity improvements, a key factor instrumental in popularizing the usage of advanced ceramics in several industries. While research and innovation in advance ceramics continues to reveal unprecedented uses, evidence suggests that the field is much broader than is usually assumed. With Japan and the US taking lead in the field, India is not far behind. Taking cues from the global market, the Indian ceramic industry is now focusing on an export-led-growth strategy.</p>
Key Takeaways	<ul style="list-style-type: none"> • The futuristic Research in ceramics and glass is of importance in areas of automotives and mobile phones. • The uses of advance ceramics are many both in civil and strategic purpose, so there is a need of innovative research in this area. • Research and innovation in advance ceramics has reveal unprecedented uses and proven that the field is much broader than is usually assumed.
	Session 1 – Advanced Ceramics
Issues Deliberated	<ul style="list-style-type: none"> • Non Oxide Ceramics • Ceramic Membrane
Key Speakers/	<ul style="list-style-type: none"> • Dr H S Maiti, Senior Adviser, CSIR • Dr P K Das, CGCRI

Panelists	<ul style="list-style-type: none"> • Dr S Bandyopadhyay, CGCRI
Highlights	<p>H.S Maiti, Senior advisor CSIR started the Conference with a Welcome Remark. He gave a brief on the status of non-oxide ceramics in India. He also welcomed the experts and invited them for their presentations.</p> <p>Dr P K Das, CGCRI elaborated on the status of Non oxide ceramics in India. He said, the non-oxide ceramic products are costly because of high processing cost and therefore are not acceptable. Because of low demand there is a lack of expert research in non oxide ceramics. Hence the segment has had limited scope in India till now. He remarked the CGCRI has developed a state of art technology in which non oxide materials are converted into products which are being used for civil purpose.</p> <p>Dr S Bandyopadhyay, CGCRI spoke on the subject of Ceramic membranes. He explained the various types and applications of ceramic membranes. He said, CGCRI has already developed clay – alumina and polymorphic membranes which are used at room temperature. The future need is to develop ceramic membranes for clean energy production.</p>
Key Takeaways	<ul style="list-style-type: none"> • Non oxide ceramics are of great importance and required greater focus on research. • The futurs task is to develop ceramic membranes for clean energy production, as clean energy is the need of the hour.
	Session 2 – Energy and Health Care
Issues Deliberated	<ul style="list-style-type: none"> • Bio Ceramics • Fuel Cell & Battery
Key Speakers/ Panelists	<ul style="list-style-type: none"> • S K Banerjee, Senior Ceramic Technologist • Mr R K Bhattacharya, Head- BioCeramics, IFGL • Dr Indranil Manna, Director, CGCRI • Dr. R N Basu, CGCRI • Mr S D Majumdar, Senior Vice President H & R Johnson
Highlights	<p>S K Banerjee, Senior Ceramic Technologist welcomed the experts and invited them for their presentations.</p> <p>Mr R K Bhattacharya, Head- BioCeramics, IFGL elaborated on the Bio ceramic implants and their various applications such as replacements for hips, knees, teeth, tendons and ligaments, repair for periodontal diseases, maxillofacial reconstruction, augmentation and stabilization of the jaw bone & bio ceramic coatings. He said the advantages of bio ceramics are many such as, biological compatibility, activity less stress shielding and no disease transmission He also</p>

	<p>elaborated on the present status of bio ceramics in India and the role of IFGL.</p> <p>Dr Indranil Manna, Director, CGCRI elaborated on the various uses of Bio – Ceramics in medical science and specifically in implantation of human body part. The bio ceramics are used in human body parts such as finger joints, affected bones, etc. because it is lighter than metal and safer in human body. He stated CGCRI has been able to produce many bio-ceramics indigenously, which are cheaper than the imported products. He said, India produced only one fifth of the product imported.</p> <p>Dr. R N Basu, CGCRI spoke on “Fuel cell and battery”. He gave the detail of the activities taking place at CGCRI such as Solid Oxide fuel cell activities of CGCRI. He also elaborated on various types of fuel cell: Alkaline, direct methanol, phosphoric Acid, Molten carbonate, Solid oxide, proton exchange membrane etc. He expressed his concern about global warming and suggested that the ceramic materials could help in developing the source of clean energy.</p> <p>Mr S D Majumdar, Senior Vice President H & R Johnson said that new Technologies need to secure energy supply to future generations and Advanced Ceramic Material can play a big role. He also said, the Research in photovoltaic across whole world is driven by three factors - Sunlight is free of cost, rapid depletion of fossil fuels and global warming. PV modules using crystalline silicon are being widely used for power generation as they are considered - a source of clean energy. He also mentioned the HRJ initiative in developing Photovoltaic Tiles using CIGS technology for Residential Application.</p>
Key Takeaways	<ul style="list-style-type: none"> • India continues to develop the bio ceramics material for medical purposes as it is much cheaper than the imported material • Advanced ceramics can play an important role in developing clean sources of energy
Participants	<p>The session was attended by 63 representatives, comprising CEOs and senior advisers from the ceramic industry, manufacturer of ceramic products, academicians and policy makers across the country.</p>