

Keynote Address
By
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Dignitaries on the dais, ladies and gentlemen:

I feel privileged to be speaking to you on this international conference on a topic of considerable importance. The quality and nature of participation with a galaxy of experts and professionals in your conference is a testimony to the broad interest and topicality of the issues being discussed. I congratulate both the Cement Manufacturers' Association and the Institute for Industrial Productivity for organizing the 2nd edition of the Conference within a span of a little over one year.

To tell an audience such as this about the environmental or economic significance of enhanced use of alternate fuels and raw materials in cement industry, would be a preach to a convert. Let me instead briefly present you a generalist's and to a lesser extent Government's perspective of cement industry in India and the issues at hand.

First, the broad context. In an emerging economy such as India, cement is literally the glue of progress, a binding agent holding together the act of creating physical infrastructure that is so very essential for economic well being of the multitude of masses. As an economy charts out its path to prosperity, generally the per capita consumption of cement grows until at some point of time it peaks and, thereafter, it gradually tapers down and stabilizes at a much lower level. Most emerging economies are presently marching up the slope and are located quite a distance away from the peak. Yet, globally cement plants are already responsible for around 5% of CO₂ emissions. In India I suspect this percentage is even higher.

It is in the context of these facts that the cement industry in India has to make efforts to reduce its carbon footprint. We must keep in mind that whatever efforts we make today would yield us rich dividends in the long run

especially as the consumption of cement in India is likely to increase at a faster pace as we relentlessly march towards peak that I adverted to a little while ago.

What can possibly be done? We may enhance the thermal and electrical energy efficiency by deploying state-of-the-art technologies in new cement plants and retrofitting the existing plants with energy equipment. We may also resort to waste heat recovery and clinker substitution through increased use of blending materials. And finally we may increase the use of alternative fuels and raw materials that would otherwise be burnt in incinerators, land filled or destroyed in possibly harmful ways.

I believe a lot of work has been done globally for improving energy efficiency and cement plants in India are already among the most efficient in the world. I compliment the efforts made by the Indian cement industry in this regard. Further, the Indian cement industry has been gradually increasing the share of blended cement in its overall cement mix. It has been a major sink for useful disposal of fly ash and blast furnace slag and has thus helped us in reducing the pollution loads and environmental nuisance emanating from thermal power stations and steel plants.

However, the cement industry in India has not done so well in employing waste heat recovery systems perhaps because of high capital costs. In order to make co-generation of power through waste heat recovery an attractive and techno-economically feasible proposition, our Ministry had recommended in the XII Five Year Plan report that co-generation of power through waste heat recovery in cement plants should be accorded the status of renewable energy.

Co-processing of alternative fuels and raw materials too, has not been deployed by the cement industry in India on a large scale though it leads to a win-win situation for both the providers and the users of such materials. The urban landscape in India is due for an accelerated transformation. Though India has been a reluctant urbaniser in the past, the Government is now gearing up for creating world class urban infrastructure and the pace of urbanization is going to pick up considerably in the next few decades. In the industrial corridors alone, our Ministry proposes to create a number of Greenfield smart cities with the best-in-class infrastructure. These cities would be generating a huge amount

of urban solid waste, the effective use of which is likely to become very important in government's agenda for economic development. I understand that cement kilns are particularly well suited for utilizing urban solid waste. In fact, cement industry could well prove to be a scavenging industry burning alternative fuels such as municipal solid waste, plastic and polythene wastes, agro wastes, shredded tyres, paint sludge and could help conserve fossil fuels to some extent. I must say that the Industry has taken some steps to utilize wastes from other industries like paint sludge, refinery sludge, plastic waste, tyre chips, with a number of our cement plants regularly co-processing such wastes. However, at present, the Thermal Substitution Rate of the Indian cement industry ranges between 0.5 to 1%, while in some developed countries, up to 60% substitution rate has been reported. So, Indian cement industry has still a long way to go before they reach the levels attained in developed countries. I understand that widespread use of alternate fuels in cement industry would require an enabling eco-system in which alternate fuel of appropriate quality is available in ample quantity and at appropriate price. The waste generators and the cement industry would need to enter into a collaboration for efficient collection, segregation, transportation and processing of waste in a synergistic manner. We, in the Central Government, would be particularly looking forward to suggestions emerging from this conference about what the Government needs to do to create such an eco-system. On its part, the cement industry would need to do some amount of R&D and careful planning to handle wastes of different types and to ensure that the productivity does not suffer or emissions of basic and hazardous pollutants do not increase.

It is indeed gratifying to note that the cement industry in India has already initiated a number of positive steps. It has actively participated in the Perform, Achieve & Trade scheme sponsored by the Bureau of Energy Efficiency under the National Mission for Enhanced Energy Efficiency. This would help boost the energy efficiency and conservation efforts made by the industry, and ultimately contribute towards reduction in emission of Green House Gases. I must add that apart from national priorities, there are a number of inter-governmental agreements to which we are signatory and hence have to follow their stipulations. Some of these have a direct bearing on the cement industry.

I am sure, the industry will gear up to ensure that we do not lag behind in fulfilling our obligations under these agreements .

I may mention that the Department-related Parliamentary Standing Committee, in its 95th Report and also our 12th Five Year Plan report have suggested that co-processing of industrial wastes be encouraged and incentives given to the plants using such wastes. These reports have also highlighted the need for effective disposal of fly ash. DIPP is cognizant of the various measures suggested in the 12th Plan document such as formulation of norms for emissions, change in public belief, comprehensive monitoring of emissions, adoption of best practices, trans-boundary movements, incentives for disposal through co-processing in cement kilns, stringent penalty for wild dumping/illegal land filling; besides recognizing training in operational practices of alternative fuels, and identification of Best Available Techniques for adoption in Indian cement plants.

The cement industry in India has grown rapidly since 1989, the year of delicensing. From the modest base of 59 million tonnes capacity and 44 million tonnes productions in 1989, the cement industry in India grew almost six times in the next 25 years. The industry now has 360 million tonnes capacity producing more than 256 million tonnes annually, thus making India the second largest producer of cement in the world. However, the industry is facing a number of challenges. There is a mis-match between the installed capacity and the demand for cement in the country. The industry is constrained by inadequate availability of coal and fly ash. And then, there are other general problems such as those relating to power, infrastructure and logistics.

Let me assure you that DIPP as the nodal central department for cement industry is not only acutely aware of all these concerns of the industry but is also taking them up with all sister Departments and Ministries from time to time for their resolution. I am confident that the measures that are being taken by the Central Government for revival of Indian economy, including its major thrust for completion of important infrastructure projects on a fast track, will certainly give a significant push to the cement demand and would also take care of the Industry's other concerns.

This International Conference offers a great platform on which policy makers, environmental regulators, industry experts and others may discuss in-depth various issues relating to increased usage of alternate fuel and raw materials in cement plants. We would be eagerly looking forward to receiving the key recommendations emerging from this International Conference. On our part, we will do everything possible to act positively on these recommendations.

I am grateful to the Cement Manufacturers' Association for giving me the opportunity to share my views with the distinguished experts and professional who are present here today.

Thank you all for a patient hearing.