

"Construction chemicals market may grow 100 percent over its current level by 2007"

ICJ: The construction chemical industry in India has come of age. Although the awareness about the beneficial effects of the construction is growing, its vast potential is yet to be tapped. Could you briefly tell us about the current scenario of this upcoming industry?

DS: The term 'construction chemicals' encompasses a very broad range of materials but it is now commonly used to cover the various branded chemicals such as admixtures, coatings, repair mortars, etc. The use of such materials is normally specification-led and as such, in India, the use was limited till the early eighties.

With the entry of multinationals like Fosroc, Sika, MC-Bauchemie and MBT, etc. the use of purpose-designed chemicals has accelerated, particularly in the 90s.

Currently, there are a large number of companies including large multinationals and smaller companies (some with 'foreign' collaboration) offering a range of chemicals. This offers a wide choice to customers but also poses a problem in choosing the right product from too many 'look alikes'.

The use of construction chemicals in India is still in its infancy compared to developed economies as well as smaller countries like Dubai, Singapore, Malaysia, etc.

ICJ: Most of the leading internationally-acclaimed brands of construction chemicals are available today in India and the manufacturers have the capability to deliver even the latest brands. How has this transformation occurred in a span of just around 15 to 20 years or so?

DS: It is true that some of the most recent technology-based products are available for Indian customers – although imports still are very costly

due to the plethora of duties and surcharges etc.

Since mid-eighties the need for better quality constructions — be it tall structures like silos, highly congested reinforced sections, water tight structures — was felt and the offer of properly-formulated, internationally-proven products met this need.

Since early eighties, the return of several civil engineering profession-

D. Sitaramaiah



Mr D. Sitaramaiah obtained his M. Tech degree in Foundry Engineering from IIT Kharagpur and worked till recently with Fosroc India — a part of the British multinational Burmah Castrol group. In 1987 he took over as Chief Executive of Fosroc India – at that time a small company bringing admixtures and other construction chemicals into the Indian market. By the time he left for Fosroc, Iran, on a transfer in 1997, Fosroc India achieved a leading position with good market share. After

finishing his assignment in Iran at the end of 2000, Mr. Sitaramaiah joined MBT India as its Managing Director.

Mr. Sitaramaiah has been actively involved with various professional bodies and has been a Governing Council member of Indian Concrete Institute for several years.

Mr. Sitaramaiah's involvement with concrete admixtures goes back a decade and a half. His keen interest in spreading the usage of admixtures through participation in and organisation of various technical seminars has been maintained throughout this period. The initial work on a monograph for concrete admixtures under the auspices of Indian Concrete Institute was actively supported by him. Active dialogue with principal raw material suppliers for admixtures and up gradation in quality as well as efforts to spread awareness /initial field testing of admixtures for self compacting concrete (polycarboxylic ether based) are evidence of his deep interest in this area. Mr Sitaramaiah is also actively involved in forming a Cement Admixture Association although it is yet to become a reality.

als from middle east projects with exposure to a range of construction chemicals has accelerated the acceptance of these products in the Indian market.

With a large number of suppliers to choose from, customers are also confident of the right prices prevailing.

ICJ: Amongst the different segments of construction chemicals, viz, admixtures, repair-rehab materials, waterproofing materials, joint sealants, etc what would be the rough share of each of these segments in the total market? Which, amongst these, are the major growth segments?

DS: This is a difficult areas as no published figures are available. At best we can make educated guesses based on our knowledge of the market and interaction with others in the industry.

Our estimate is that out of the total construction chemicals (exploited market at this stage), admixtures contribute about 30-33 percent, industrial flooring about 20 to 23 percent, water-proofing products about 20 percent, repair and rehab products 15 percent, and the rest coming from sealants, auxiliary products such as sealants, adhesives etc.

As seen by us, the real growth areas are admixtures and repair system products although another bout of high industrial growth can see a spurt in floor treatment business.

ICJ: It is widely accepted that the use of chemical admixtures – mainly the plasticiser, superplasticisers, retarders etc – improve a variety of properties of concrete, mainly its durability. In spite of this the use of these materials has not shown a remarkable increase. What are the factors that hinder the increased use of chemical admixtures?

DS: Despite the impressive growth of RMC in 3 or 4 metropolitan cities, concrete is still largely site batched.

While large projects have adequate quality control systems, it is generally the small to medium sized contractor who desist from using admixtures – partly because of the extra cost as perceived and not being fully convinced about the benefits of using admixtures.

I remember a prestigious project at Bangalore in mid 90s where all the specifications were in place but the sub-contractor's sub-contractor managed to use the minimum amount of admixture inspite of the attractive prices paid by the client for the construction.

The general level of education regarding the benefits of admixture usage versus cost paid at different levels and the insistence (really

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implemented) of the consultant that an admixture *has* to be used: these factors will bring in widespread usage.

ICJ: To what extent has the ready-mixed concrete industry given a boost to the use of chemical admixtures? Also, can you expect that the ongoing infrastructure works including the NHDP projects trigger further growth in the use of these materials?

DS: The increased acceptance of RMC in cities like Bangalore, Mumbai, Delhi, Chennai, etc. has definitely spurred on the growth in admixture usage. The fact that the concrete is 'factory' produced to specifications and often involving travel, waiting times makes it essential for WRA / HRWRA alongwith a retarder to be used.

The ambitious infrastructure projects including NHDP and several urban flyovers, grade separators, sealinks etc are leading to a

demand for large volume of admixtures. However, the complex requirements at some of these sites can only be met by suppliers with necessary formulation experience and in depth knowledge of concrete.

ICJ: What steps are needed to create more awareness about the right use of construction chemicals in general and admixtures in particular? Don't you think that the manufacturers have to take a leading role in this respect?

DS: The growth in construction chemicals is an evolutionary process as has been seen in the past several years. There is, however, a need to accelerate this evolution in order not to be left too far behind in adapting new technology.

The major onus for bringing this about is perhaps on the construction chemical manufacturers but others who can facilitate this are consultants / specifiers.

Esteemed journals like yours also have a major role in giving prominence to informative write ups, case histories, etc. This is already being done and the tempo needs to be maintained.

Every opportunity — such as a locally-organised seminar, workshop, direct mailer should be taken by manufacturers of construction chemicals with participation from practicing professionals — should be used to spread the word.

ICJ: Some time back, you had taken a lead in forming the so-called Cement Admixture Association. What is the progress in this regard?

DS: About 6 years ago some of us leading construction chemicals manufacturers mooted the idea of forming a Cement Admixture Association with the objective of achieving precisely what is described in the previous answer i.e. increase awareness of benefits from admixtures and other construction chemicals at different levels in the Industry. It was not meant to be a trade body.

In the couple of meetings we had, we discussed the modalities of using the forum but perhaps there was some lack of mutual trust that this forum is meant for the common good of all. Since I left for an assignment in Iran shortly after this, I lost touch but understood that no further progress was made. This concept needs to be revived now.

ICJ: The IS 9103 was revised in 1999 after a gap of almost 20 years. Do you think that a further revision of this code is necessary to bring it in line with ASTM C 494 and EN 934?

DS: We appreciate that considerable effort has gone into bringing in the revised IS 9103 version in 1999. However, there is still scope for improvement such as a more detailed classification of admixtures includ-

ing combination of admixtures like HRWRA with retarder, etc. Also, the 1999 version stipulates certain tests such as ash content, the procedures for which appear difficult to practice. The limits specified for some of these values are a little ambiguous and can be interpreted

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differently by different persons. Perhaps, the BIS committee can invite suggestions for modifications from the stake-holders and review the same.

ICJ: You have made immense contribution to the growth of the construction chemicals industry during the past 15 years. How do you foresee further growth of the industry in the coming year ?

DS: While we Indians may be slow to adapt to new technologies, but once the ideas take roots the growth is continuous and steady. At a gathering at Deputy British Commissioners' residence in Chennai about 5 years ago, one of the 'Concord Mission' members remarked to me, "you are merely scratching the surface as far as construction chemicals usage is concerned in India at this stage. The potential is enormous!". I concur with his view. We shouldn't be surprised if the construction chemicals market grows a 100 percent over its current level by 2007.

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