Russian cement industry - Challenges and Opportunities

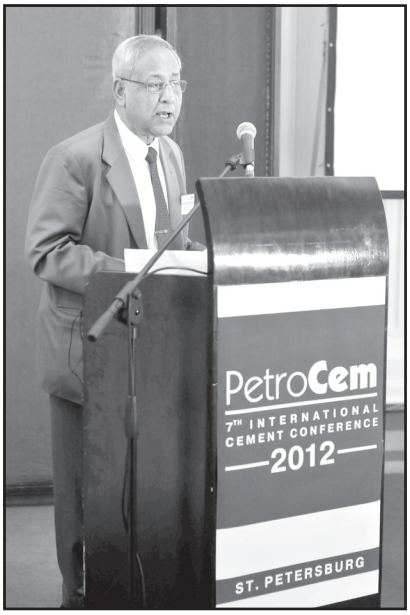
Dr. A.K. Chatterjee, participated at the PetroCem Conference in St Petersburg in Russia in April 2012 at the invitation of the organizers. He recalls his impressions of the cement industry there when he was a student at the University of Moscow in the 60s and when he revisited Russia in the late 80s. Now, back from his latest visit, he sees opportunities for the Indian cement industry to participate in the modernization and upgradation programs of the Russian cement industry. Excerpts.

ICJ: Even though cement industry related publication of the western world write occasionally about Russian cement industry, not much is known about the PetroCem Conference in India. How did PetroCem find you out?

Dr. Chatterjee: It was through "Cement and its Applications journal" which was founded over a hundred years ago and which is a privately owned independent trade magazine dealing with the challenges of production and application of cement in Russia, in all the newly independent states on the territory of the former USSR and in other countries of the world. The magazine, which is the only cement centric Russian-language periodical, works in close co-operation with cement plants and holding companies, equipment manufacturers, producers of concretes, dry construction mixes and other cement products users, as well as with research and design institutes and institutions of higher education, all of those being its major subscribers. Great attention is paid to the challenges of cement plants development, capital flow and economic issues of Russian and international industry. The magazine is distributed all over Russia, CIS countries and abroad. It is published bimonthly with news and analytical materials in English. During my student days this monthly journal used to be called 'Tsement 'and generally contained about 30-40 big pages. Small prints, no get up, but had total functionality without any grandeur. It was the most widely circulated cement journal in the then Soviet Union. It started in 1901. So it came as a surprise to me when a senior member of this journal approached me with an invitation to participate at PetroCem 2012 during the ICCC at Madrid in 2011 where I was a speaker at the inaugural plenary session. They gave me two or three current issues of the journal to show how over the years, the journal had been transformed. What they gave was still in Russian but the get up was modern, the printing was wonderful, the journal was almost entirely on art paper and full of technical materials. I asked them if it is the same cement journal that I used to read during my student days. They said yes. Ms. Mila German, whose business interest includes cement manufacturing, now owns this publication. As the Director General of this publication she focuses on the academic part for improving the journal.

ICJ: Tell us about PetroCem. What is the scale at which it is held?

Dr. Chatterjee: Petrocem conference is the prime event of knowledge dissemination in the cement Industry today in the Russian Federation. This conference series was started in 2000. It is held every two years. When it started about twelve years ago it had about 170 delegates only. Now, it attracts over 500 delegates. Almost 300 companies are represented. The constituents of the then Soviet Union such as Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine look forward to participating at this event. Normally, PetroCem is held in one of the most prestigious hotels in St Petersburg. This year it was held in Hotel Astoria during April 23-26, 2012. The event is accompanied with a large exhibition where all



Dr. Chatterjee addressing the delegates at the conference

Delegates at the event

the cement machinery industry's global players such FLSmidth, KHD Humboldt Wedag, Polysius, Loesche etc take part, apart from Russian companies. The conference program includes multiple theme – based sessions and concludes with a plant visit on the last day of the conference. The conference is provided with simultaneous translation facility of Russian to English and vice versa. In this conference the prime focus is the cement industry. In the sense that the existing plants and their challenges, modernization and new projects in the pipe line and projects just commissioned were focused. Of course the application areas of cement also got covered. One of the additional features in this year's conference was the discussion on the funds requirement for undertaking new projects with a session devoted to discussing such issues and where representatives from an MNC Bank (HSBC) participated. In this conference the organizers also include a few presentations on cement scenarios of different countries. For example, in Petrocem 2012 Kazakhstan's status of the cement industry, its growth prospects and related issues were discussed. In the same way the organizers often invite speakers from some of the a-little-distant-countries. This year, I was invited to talk about the Indian cement industry and its growth story to share how India became the second largest cement producer in the world and what the challenges were in the process.

ICJ: Until 90s the Russians followed a socialistic approach to their country's economy. What is the role now of the Russian Government in such events?

Dr. Chatterjee: Now it appeared to me that the direct involvement of government agencies in the cement industry has got minimized. However the conference inauguration was done by the government officials, overall plan projections of the Russian cement industry were also done by the government officials. But the government agencies seemed to underplay their roles in investing or developing new cement projects. I recall here, there were two very large institutions in the then Soviet Union. One was known as "Giprotsement". It was located in St Petersburg. Another was "Niitsement" a National institute of cement in Moscow. These two institutes were not only for research and development but also for project engineering. So, most of the new projects and new plants were engineered by them in the 60s and 70s. In fact, the Soviet Union could be credited with building the largest wet process cement plant in the world. Their designing and developing a wet process plant with a kiln of 7m diameter and 230 m length producing about 3000 tonnes of clinker per day was an engineering feat at that time. Today, it is unthinkable. A large heavy engineering workshop located in the Ural region produced machinery for such plants. Although these organizations still exist, they do not seem to play

an active role as they used to play in the past. The prolific research focus of the past appeared to have been lost. So, the Russian cement industry is now more and more dependent on Western Europe for engineering and equipment supply.

ICJ: How did you find the status of the current Russian Cement Industry?

Dr. Chatterjee: Russia's current annual cement production capacity is about 85 million tonnes. The plans and predictions are such that in about next 5 years, the country would increase it to 110 million tonnnes and in the next 5 years to 115 million tonnes. Today, 80% of the capacity is wet process plants. This is planned to be reduced to 50% and 40% in the next 5 and 10 years respectively. Today, virtually all the major cement producing MNCs are present in the Russia. For example Lafarge, Holcim, Cemex, CRH, Vicat are all present. Interestingly, however, hardware suppliers such as F.L .Smidth, KHD and some others are conspicuous by their absence in creating manufacturing facilities in Russia. This apparently suggests that MNCs bring in their hardware from West European countries.

The capacity utilization of the cement industry in Russia is generally much lower than in other important countries. One of the reasons for the low capacity utilization is that the mines remain in-operational in the snow bound areas during the harsh winter months. The limestone characteristics present another challenge. The chalky limestone is difficult to handle in the dry process throwing up challenges for equipment design. Wet process, on the other hand, perhaps is more amenable to handling such deposits.

Considering these challenges, in my presentation I described the crusher drier system that ACC implemented at Madukkarai and Chaibasa a few years ago. It uses wet process for limestone flotation, filtration to produce limestone cake with a moisture content of 22% which is fed to the crusher drier that reduces the moisture content to a level that makes the feed amenable for adopting the modern dry process for clinkerization. Perhaps it would be worthwhile to explore the possibility of adapting such systems to the Russian plants, considering their limestone characteristic and process conditions. The Russian cement manufactures face challenges that are quite different from most other countries that are blessed with temperate climate and better characteristics of limestone. Russia's raw materials are very specific; their energy sources are very specific. For example, fuel for cement manufacturing is not coal only, it could be oil or gas or coal, depending on the location. Apart from multiplicity of fuel, environmental conditions are pretty harsh in most of the situations. So these challenges have to be tackled in the project work in that country.

ICJ: What is your impression about the participation from India?

Dr. Chatterjee: At the PetroCem 2012, it was surprising to find that despite a longstanding relationship between India and Russia particularly in the defense sector; there is hardly any worthwhile relationship so far as cement industry or the civil engineering activities are concerned. I for one believe that the corresponding segments of investment in our country should be more active now to get into Russia and adjoining countries. An inquiry about the presence of process consultants reveals that Holtec lately entered into Azarbaijan. Otherwise in Russsia there is no Indian Consultancy unit working. Agencies like PEG from Europe are active in Russia. In fact there is a Chinese cement consultancy firm called CMC showing its presence in Russia but one could hardly find any activity of this kind from India. Even at the seminar there were hardly any delegates from India. Russia is regarded as a friendly country; we have several agreements signed between Department of Science and Technology (DST) and Russia. But when it comes to doing something concrete in the field of cement, concrete, construction there was hardly anything.

ICJ: What would you say about Russia's abundant natural resources and the potential for using India's cement industry experience in that country?

Dr. Chatterjee: Russia today is the largest country in the world. It has $1/8^{th}$ of the entire inhabited land of the world. Its minerals and energy resources surpass all the countries in the world. The oil production is the largest in Russia even today. As for water, $1/4^{th}$ of the world's fresh water sources are in Russia. The country is spread over 17 million square kilometer and 9 time zones, meaning if one is in Moscow and talking to Vladivostok, one is talking across a 9 hour time difference. The expanse of the country can be gauged from the fact that in our student days the trans-Siberian train took about seven days to reach Vladivostok a city in the east from Moscow a major city in the west Russia. It used to be an unforgettable journey across the then soviet union. Although faster communication and transport systems are there to-day but the expanse of the country remains as bewildering as before.

ICJ: Any suggestion for professionals from India to participate in Russian cement industry?

Dr. Chatterjee: C-FARM is a Delhi based Company. It is promoting fly ash use in many areas including building materials. Russians have taken the imitative of approaching DST for a possible collaboration for fly ash management with this company. It is a kind of revelation that Russians found out about this company and approached DST and C-FARM, instead of a proactive approach the other way round. We can do much more there. I believe the Indian cement industry now has the capability of undertaking investments there. Cement industry in India can take up new projects in the Russian Federation and adjacent countries. They can expand the various forms of consultancy in that part of the world. However, none of this seems to be happening at present.

ICJ: How is the scenario of investment security in particular and security in general in Russia?

Dr. Chatterjee: The ten years between 1990 and 2000 were very bad years for the entire Russia. They switched over to market economy but they were not prepared for it. So the entire economy collapsed in that country. After 2000 things started looking up. Today, I find that the dollar rouble parity has been fairly stable for a long time. About 40 years ago, when I was a student there, and even about 25 years when I went there before this visit, dollar as a currency was a much sought-after legal tender and private moneychangers were prepared to pay several times its official value. Now, during this visit, the craze for dollars was not evident to a common visitor like me. However, If the Indian economy weakens and dollar becomes more expensive, then one will need to imagine the fallout of all this.

ICJ: Reports appearing in Journals published from Europe suggest that MNCs have adopted an incremental and cautious approach to investing in cement industry in Russia. Any impressions on investing pattern in the region where Russia is located?

Dr. Chatterjee: If the reports of MNCs cautious approach towards investments in the Soviet Union's cement industry were true then how so many MNCs are owning cement plants in that region? For example, Lafarge owns plants in Russia, Ukraine and Moldova; Heidelberg owns companies in Russia, Ukraine, Kazakhstan, Estonia and Geogia; Dyckerhoff is in Russia and Ukraine ; Holcim in Russia and Azarbaijan ; C.R.H. have a representative office in Russia but own a plant in Ukraine ; Cemex-active in Latvia; Italcementi, Vicat and Steppe cement are active in Kazakhstan. If the investment climate was not satisfactory, would so many companies have been there? One would think that India and Russia have agreements that support investment in either country, that has the necessary mechanisms for creating credit lines and associated security provisions for investments. Under those circumstances one wonders why a closer business relation between these two countries should not emerge. It appears appropriate to push this through our Ministry of Economic Affairs. During the periodic review of the bilateral relations of these countries why can't cement industry place its agenda?

ICJ: Just to bring out a specific detail of technology, a report suggest that many of the Russian plants still use open circuit mills for cement grinding against closed circuit grinding used in most other parts of the worlds. Clearly, there is a scope of upgrading cement grinding.

Dr. Chatterjee: As already mentioned the old plants were all in wet process because they had no pressure of energy at all. However, today the scenario is changing; energy is becoming an expensive item there also. People are looking at that and trying to find out the best way for moving forward. In fact, I would say that operation of open circuit ball mills and wet process plants, are opportunities for India. Because India has passed through some of these things may be thirty – thirty five years back. Why not we expand the horizon of consultancy to many of these things? I believe their main difficulty is financing of modernization projects. Therefore those who can afford to undertake such projects along with funding obviously get red carpet welcome. This is something also India should explore. If India can offer a 500 million dollar credit line to a neighbouring country, I do not see any reason why we can't do that for countries where there are real good business opportunities.

ICJ: What is the scenario of infrastructure in Russia? Did you see any major infrastructure projects being constructed? Please share your impressions about developments in the housing sector also.

Dr. Chatterjee: Almost everywhere construction is going on. As we drove past the airport at St Petersburg, the new airport under construction was visible. The new airport terminal building will perhaps be the largest terminal in Europe. They are taking up large projects. Their Infrastructure is not as good as that of the Western

Europe but again it is not as bad as many parts of our country. And there is a focus on infra on housing, commercial establishment. As you move out of Moscow there is a belt of land where you see individual houses being built, you can buy out a plot of land for housing there. Dachas or summer houses are also possible in the adjoining woods. Russia's population is about 145 million. Their cement consumption per capita is about 580 kg which is about three times the consumption of India.

ICJ: Do you think Indian consultants could contribute to the impending modernization and upgradation of Russian cement plants?

Dr. Chatterjee: I would certainly think so. Take for example Consultancy Development Centre (CDC) in Delhi, which has been rejuvenated as a forum for individual and small consultants. It could take the lead and explore where and how Indian consultants could work with the Russian cement industry. Since CDC is an offshoot of DST, The penetration into the Russian system may be easy.

ICJ: You speak Russian fluently. It must have come as a pleasant surprise to the organizers and delegate there.

Dr. Chatterjee: Although my doctoral work was in Russian and I could read, write and speak in that language as proficiently as in English, because of the lack of practice over decades, my spoken Russian has been weak. Nevertheless, when I was asked to chair a session in PetroCem 2012, I ventured to address the gathering in Russian. I do not know how but the language flew freely and I got great ovation, which will stay in my memory for long. This helped in my being even closer to the delegates.

May I close this interaction with you by saying "do svidaniya", meaning "see you again" ?

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