

[CemExec] Soumen Karkun, Holtec: Understanding South & Central Asia and the future of cement engineering services (Part 1 of 2)

Features

Wednesday, 02 December 2009

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CemWeek recently interviewed Mr. Soumen Karkun, Deputy Managing Director of Holtec, to discuss the changing landscape of the global cement industry. In this first part of two CemExec features based on this discussion, Soumen discusses his views on the South Asia market dynamics and potential.

Additionally, he draws upon Holtec's experience in Azerbaijan, and Tajikistan to showcase challenges and opportunities particular to these markets. For this time, we conclude the initial issue of the interview with a reflection on how the the engineering consulting market has evolved over the years.

(CEMWEEK.COM)

CemWeek: Tell us a bit more about your company, and your role within it.

Soumen Karkun: Holtec Consulting Private Limited, incorporated in 1967, is an ISO



certified, Indian advisory firm uniquely positioned to service the entire **HOLTEC** gamut of engineering and business consulting needs of the global cement industry. The HOLTEC group consists of three other wholly owned subsidiaries, Holtec Global, Technology Applications Consultants Ltd and Holtec FZE. While the first two are headquartered in India, Holtec FZE operates from Sharjah, U.A.E. and is principally focused on operating and managing cement plants.



Mr. Soumen Karkun, Deputy Managing Director of Holtec

A member of the Board of Directors of Holtec Consulting, I hold the position of a Deputy Managing Director. Other than corporate responsibilities, I look after the Process Engineering, Raw Materials (Geology & Mining) and Business Consulting functions and am thus responsible for all consulting assignments relating to pre-investment and performance enhancement activities.

CW: Please describe some of the flagship cement-related consulting assignments you have been involved in? Any particularly interesting ones you are working on at the moment?

SK: Since our inception in 1967, we have executed over 3,200 consulting assignments in more than 80 countries.

Currently, we are working on 230 assignments, 150 of which are in the domain of cement engineering consulting, 50 in pre-investment & performance enhancement studies and 30 in other areas. These projects span 100 clients in 27 countries. Of the 150 assignments in cement engineering, approximately 50% concern themselves with greenfield cement units, including integrated plants and grinding units, about

30% deal with brownfield expansion and rehabilitation schemes, about 10%, with captive power plants, with the balance being of miscellaneous nature.

Our credo has always been to give our best to all assignments, irrespective of their nature, their size, their location or who the client is. Consequently, it is difficult to identify a unique, “flagship” consulting assignment.

Despite this, I shall try to reproduce key features, of one of the most comprehensive assignments executed by Holtec in the domain of business consulting:

- Financed by an international funding organization, this assignment was carried out to develop an overall modernization strategy for the cement industry of a South Asian country. The coverage was conceived to include an Overall Industry Strategy in tandem with integrative component strategies in the areas of Marketing, Raw Materials, Technology & Operations, Transportation, Human Resources, Finance and Inter-Company Issues & Privatisation for the overall industry as well as its constituting units.

Holtec's office

- The assignment was executed in two distinct phases:
 - The **Situation Analysis** phase, involving 50 man-weeks of consulting time, was sandwiched between an Inception Workshop and a Situation Analysis Workshop. It had as its output:
 - An *Environmental Analysis* component (comprising of political, economic, social and technological trends and their implications on the industry in terms of opportunities and threats, key success factors and the availability of resources in the external environment)
 - An *Internal Analysis* component (consisting of the strengths, weaknesses and resource bases for each operating unit of each firm constituting the cement industry of that country).
 - The **Strategic Action Planning** phase, involved 100 man-weeks of consulting time, and was concluded by a Strategic Action Planning Workshop. The output of this phase included:
 - The development of *Industry & Individual Corporate Objectives*
 - The *Development And Evaluation Of Strategic Options* to generate an integrated strategy mix
 - The *Development Of Industry-Based And Individual Corporate Action Plans* to effect targeted outcomes in each of the seven functions and
 - An *Assessment Of Resource Requirements* in terms of physical assets, finance, skills and systems required to support the laid down action plans.
- The team, that executed the assignment, was gratified by the customer feedback at the conclusion of the assignment “ ... the most comprehensive sector study ever done in the cement industry ...”



CW: Please describe the South Asian cement market and what makes it unique and where is the cement market headed? How are the Indian, Pakistani, Bangladeshi and Sri Lankan markets similar and different? What are some probable future scenarios?

SK: Let me commence by presenting a table of statistics:

Country	Capacity/ Demand (mm tpa)	Expected Demand Growth (next 5 years)	Product Mix	Cement Spend (US \$mm pa)	PCC (kg pp pa)
India	213/ 184	9 -10%	OPC (25%), Blended Cement (75%)	18,525	160
Pakistan	44/ 19.5	4-6%	OPC (95%), Others (5%)	1,480	110
Bangladesh	22/ 8.5	7-7.5%	OPC (5-10%), Blended Cement (90-95%)	830	55
Sri Lanka	6/ 3.5	6-7%	OPC (70%), Blended Cement (30%)	490	170

The uniqueness of the South Asian cement markets is characterised by their extremely low per capita consumption (PCC) and thus, their high growth potential. Historically, these markets have shown growths between 6-10% p.a. Small improvements in the economic environment translate into a substantial growth in cement consumption. Going forward too, we expect these growths to be at least maintained, if not exceeded with housing and infrastructure being the primary drivers.

Other similarities include the low presence of bulk cement, prevalence of cement retailing, etc. All these have to do with the markets, which consist of a large number of small customers as compared to more mature markets, where there are fewer, institutionalised customers.

Other than the huge differences in the respective market sizes, a major difference arises due to the inadequacy of limestone in countries like Sri Lanka and Bangladesh, forcing a consequent reliance on imports of clinker and cement. Availability of blending materials within each country also dictates the proportion of blended cements. Thus, while the proportion of blended cements in India is as high as 75%, it is much lower (10 - 15%) in the other countries.

Other differences between these countries are largely on account of the political and security situations, which have a bearing on the economic growth, investment commitments and thus, production capability, demand and supply.

CW: You have also worked in Russia, Uzbekistan, Azerbaijan, Georgia - tell us about the work you have done there and describe those markets and their challenges and opportunities?



A view of the Akhangaran Cement, Uzbekistan

SK: We first worked in these countries in the mid 1990's soon after the break-up of the Soviet Union. Initially, we were performing technical and market due diligence for investors who wished to acquire cement plants, which were being divested by the State. In addition, we also worked extensively in helping companies set up marketing systems in the light of the changed market scenario.

More recently, during 2009 itself, we have been working in Azerbaijan, Kazakhstan and Tajikistan: In Azerbaijan, we are involved in feasibility studies, raw material investigations and plant engineering for establishing a 5,000 tpd cement plant; In Kazakhstan we are involved in equipment procurement and plant engineering for establishing a 2,500 - 4,000 tpd cement plant; In Tajikistan we are involved in feasibility studies related to a 1,500 tpd cement plant.

The opportunities in these countries are indeed immense in terms of steep demand growths and the consequent requirement of replacing obsolescence by technologically contemporary and cost-efficient production capabilities. The challenges lie in successfully addressing an environment consisting of perceived economic volatility, bureaucratic hurdles, unfamiliar engineering standards and cultural milieu.

The market characteristics of two countries, where we have recently worked, are shown below:

- The market of **Azerbaijan** is expected to move from a monopolistic situation to one of oligopoly, which could involve 4 players. The demand growth of over 20% pa over the period 2000 - 2008, could decelerate significantly in the period 2009 - 2017, to single digit values. Despite this demand would still increase from its current level of 4.3 mio tonnes to a little over 9 mm tonnes in 2017. The steepest deceleration would occur in the period 2009 - 2011. The current deficit situation, which is fed by over 50% imports, could disappear and a marginally surplus situation could prevail between 2011 - 2014. Cement prices, in the near future, could thus drop from their current level of about USD 120 per tonne by about 10%. This could initiate a change in the current product mix of Cem I 42.5 (46%) and Cem II 32.5 and 42.5 (46% and 8%, respectively), with the share of Cem II 32.5 increasing to over 60%.
- The market of **Tajikistan** too is expected to move from a monopoly situation to one involving a maximum of two/ three domestic players. Higher domestic capacity is inhibited by the paucity of large and economically exploitable limestone reserves. From its current level of a little over 1.6 mm tonnes, demand is expected to grow at a CAGR of 12.6% to about 3.9 mm tonnes by 2017, chiefly driven by infrastructure spend. The current plant, with a nameplate capacity of 1.7 mm tpa, has an actual production capability of a little over 0.3 mm tpa, primarily on account of its age and technological obsolescence. It is likely to be shut down in the near future. A large component of current demand is consequently met by imports. While the share of imports from Pakistan is currently the highest, the share of neighbouring, fuel-economic, Uzbekistan could become dominant as soon as the current political stand-off between Tajikistan and Uzbekistan is resolved. Domestic prices, currently at about USD 220 per tonne, are expected to fall to about USD 170 per tonne once additional domestic capacity is established by 2012. The current product mix consists of OPC (58%) and SRC (42%). On account of specific applications in humid environments, the use of SRC is likely to increase to 50%.

CW: You are involved in a wide range of business and engineering consulting. How has client demand for these services evolved and how has your firm adapted as a result?

SK: In the domain of engineering consulting there have been several changes. First, expectations related to the **pace of execution** and reduced delivery times for outputs have radically changed, propelling us to reconfigure our internal processes, enhance standardization, increase automation and develop and effectively utilise, reliable databases.

Second, in our plant engineering work, especially in the MENA region, we find an **increased usage of the EPC mode of project execution**. This has caused us to shift our focus from detailed engineering to review engineering in which we play the backstopping role of an owner's engineer.

Third, plant engineering too has become more complex with **individual production lines getting bigger and more automated**. Our global experience coupled with a shoring up of our consulting skill inventory has helped us cope with this change.

The domain of business consulting has also seen changes. First, reverse consolidation trends have generally been experienced in markets in which demand growth rates have exceeded 6% pa. With a premium being placed on cost-competitiveness, **innovations in performance enhancement measures are being increasingly demanded**. Our response has been two-fold - one, by adopting a holistic approach (facilitated by the fact that we have all specialist functions, working integratively, under one umbrella) and two, through the innovative use of Operations Research tools (which, till now, had been rarely employed in cost management initiatives).

Second, **client demand for quicker and more measurable results** has prompted us to disassemble larger, more time-consuming, business consulting offerings into smaller modules and accompanying advisory services with action planning & implementation assistance.

CW: Thank you Soumen for your thoughts on these interesting topics. We look forward to hearing more from you in the second part of the interview to follow.

[CemExec] Soumen Karkun, Holtec: Thoughts for the cement company CEO (Part 2 of 2)

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In this second of two discussions with Mr. Soumen Karkun, Deputy Managing Director of Holtec, CemWeek poses a series of questions based on the cement company CEO agenda. The topics covered center around innovation, sources of cost efficiencies, and sales force design.

See [here](#) for the first part of the story.

(CEMWEEK.COM)

CemWeek: Cement companies around the globe are acutely focused on cost control and efficiencies. With many operations having been upgraded, where do you see the next wave of efficiencies coming from? How should CEOs think about balancing performance and cost?

Mr. Soumen Karkun, Deputy Managing Director of Holtec

Soumen Karkun: We believe that there is still a lot of latent potential for improvement. Firstly, operations upgradation has historically been geared towards addressing energy efficiencies, equipment availability and input material costs. Adequate attention has not been directed at one of the largest components of delivered cost, viz. input & output freight. The benefit of addressing this is particularly high in countries with a large geographic area and low consumption density (tons consumed per sq km of area).

Secondly, the potential for reducing costs in non-equipment related domains, e.g. material inventories, consumable consumption rates & tariffs, financial expenses, etc. has still not been adequately harnessed.

Thirdly, upgraded facilities do not automatically translate into lower costs unless these are accompanied with better work practices and higher operator skills. In countries, which are technologically not advanced, significant efforts are required to harness untapped potential on this dimension.

CEO focus should possibly change going forward. The perspective will shift from addressing “costs” to addressing “realization (revenue less cost)”. In several companies, for which we have worked, it was easier to earn an additional dollar than to save one; it may also be remembered that saving a dollar, more often than not, involves additional capex.

Additionally, from unit consumption rates (physical metrics such as specific fuel consumption, etc) to total costs which are unit consumption rates multiplied by the unit cost rates; our experience has led us to believe that the potential to reduce unit cost rates generally remains unaddressed.



CW: You have helped optimize sales and marketing organizations as well as helped design new ones from scratch. What are some of the most common mistakes cement companies do in their approach to sales and marketing? Can you describe an example of a particularly successful organization from a sales and marketing aspect and describe why they were so?

SK: A few examples of common mistakes include:



600,000 tpy Messebo Cement Project at Mekelle, Ethiopia

- The most generic mistake that companies make is to adopt a reactive approach to most situations rather than proactively addressing opportunities and threats.
- A common ailment that we have observed is organizational inertia in modifying past practices, that are no longer relevant in a changed environment.
- Another common mistake that cement companies make is to lose customer focus during times when there is a deficit in the market. This leads to a “supplier-is-king” attitude, laxity and consequent inefficiencies which affects the proponents badly when the situation reverses.
- Yet another common mistake that some companies do is to spread themselves over a very wide geography. Companies need to scientifically identify core markets (high attractiveness *and* high competitive advantage) and consolidate themselves in these markets.
- Companies have not done enough to systemically address the perpetual conflict between the triumvirate functions of sales & marketing - production-quality. The industry could possibly gain from emulating some facets of the product management approach of retail business.

In our experience with business consulting, we have encountered six companies that were particularly successful from a sales & marketing aspect. All these companies generated, monitored and successfully implemented a compendium of time-bound action plans targeted towards resolving many of the mistake areas, shown above.

CW: Some argue that the cement industry is a very mature one. Where do you see the greatest opportunities for innovation?

SK: While the cement industry has been around for a long time, opportunities for innovations continue to arise due to changes in the external situation. Notably, significant opportunities remain untapped in the areas of resource conservation, environment management and customer service.



Cement transporting barges in Bangladesh

Innovations, in the industry, have largely been supply-driven. As a possible alternative, I would like to propose that making “affordable cement” is possibly the one major innovation that would possibly dwarf all other innovations through the sheer dimension of its implications. The thrust of innovation could be market-driven affordability and

demands on technology could be placed to realise a cement plant of the future, radically different from the ones that we have been used to.

The global average for per capita cement consumption (PCC) is currently of the order of 400 kg per person per annum. To even attain this average, a rough computation shows that the cement spend in deprived economies (those with a lower than average PCC) would need to increase by almost US \$ 100 billion! In light of the current disposable income of those who are unable to afford cement today, such an increase in cement spend appears improbable. The innovation would be to harness technology to effect a quantum increase in the customer base and consequentially the size of the cement market pie!

CW: How is Holtec helping advance a more environmentally friendly cement industry?

SK: We have a group in our Company, solely dedicated to meet the environment consulting needs of the cement industry. We have played a significant role in the formulation of the Batelle Report on the industry commissioned by the World Business Council for Sustainable Development. We have also been deployed in a variety of environment audit and due diligence projects commissioned by the World Bank, IFC, African Development Bank, etc.

Measures invoked by us to reduce carbon footprints include selective equipment/technology choice, enhanced utilisation of appropriate blending material, engineering of waste heat recovery systems, utilisation of non-conventional sources of energy, etc. In recent times, environmental subjects such as noise abatement, water conservation, proper land utilisation, mitigation of social displacement, etc. have invited our increasing attention.

CW: Thank you Soumen for sharing your views on these important topics, especially in light of the current economic backdrop. It has been a great opportunity to discuss these interesting topics with you and we look forward to catching up again!