Formwork Industry: Increasing Emphasis on Quality, Cost-Effectiveness and Sustainability Ensures Steady Growth Rate

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The growth story of the Indian formwork and scaffolding industry makes for interesting reading. It is one market segment among the variety of construction equipment available in India which has been maintaining a steady pace of growth, even when the market conditions have contributed to the volatility of sales volumes.

Slow and steady has been the story of the formwork industry in the recent past. Although the recent recessionary trends have impacted the construction scenario in the country, it is estimated that the construction industry as such would be able to maintain a steady growth rate hovering around the 13%-15% mark in the near future, given the positive signals that are emanating from the push to economic reforms in the recent past.

The Indian formwork industry’s story...
has been that of growth and consolidation. The last decade has seen the entry of several leading global players, which is aiding in giving an increasing semblance becoming an organized industry in the near future. While the organized sector only constitutes about 10% of the industry, there have been gradual improvements in quality standards because of the wider use of modern formwork systems.

The Indian formwork industry is entering a critical phase in 2013. With the government announcing a series of reform measures including the much debated FDI in retail, there is a definite buzz among manufacturers. With the government expected to give further push to reform initiatives, in the forthcoming budget, and the XII Five Year Plan (2012-17) now entering its key phase, the formwork and scaffolding equipment market is expected to get the much needed push in the near future. It is not surprising that given these trends, India continues to be one of the key markets for formwork and scaffolding equipment, with several overseas players trying to get a foothold in the market. Some of the top names in the industry include, Peri, Doka, Meva, Tac System, Kumkang Kind, Sparkonix, etc, to mention only few who have established presence in the Indian market. Several leading players will be showcasing their latest products during bC India 2013, with the equal emphasis expected to be given on offering value added services, apart from the latest technology.

Labour Shortage Issue

There are certain aspects that are unique to the Indian market that are driving forward the growth momentum for the formwork and scaffolding industry. The first key factor is the acute shortage of labour that contractors are grappling with these days. Adding to this pressure is the fact that construction costs are on the rise and in this day and age of lean construction with tight purses, automated formwork systems have come as a boon. Project delays are gradually becoming a thing of the past, thanks to the advent of reusable formwork systems. The increase in the size of the projects, especially with respect to infrastructure and high-rise projects has also been instrumental in pushing the demand for formwork. With a majority of infrastructure projects being implemented on a PPP mode, it has become imperative for project owners and investors to complete projects on time in order to generate revenues. By opting for system/ engineered formwork contractors have realized that substantial savings are ensured, resulting in turn in faster return on investments.

Smaller Cities to the Rescue

While the slow pace of growth of the
economy, especially in the last few quarters would have set the alarm bells ringing elsewhere in the construction equipment industry, the going has been relatively easier for the formwork and scaffolding equipment segment. This is because with factors such as labour shortage and escalating construction materials contractors are finding that using formwork systems is the way to go. Moreover, industry experts are optimistic that it is only a matter of time before things turn around, given the continued emphasis being provided to infrastructure development. Another key segment that is emerging for formwork and scaffolding manufacturers is the smaller Tier II and Tier III towns and cities. With the focus of the realty sector shifting to these smaller urban areas, it is one segment that is being keenly watched by almost every leading player in fray.

Leading global players have been making a beeline for the Indian market given the emphasis on infrastructure development and a rapidly developing interest in high-rise construction projects. Peri India is a good example for a leading global player offering a wide range of products in the country catering to the latest demand trends. Some of the company’s product range includes formwork girders, wall formwork, column formwork, slab formwork, monolithic housing formwork, bridge & tunnel formwork and climbing systems. A few of its top product models include ‘Peri Liwa’ which is a lightweight type of panel formwork for areas where there are limited crane capacities available, ‘Peri Lico’ lightweight column formwork and ‘Peri Uno’ monolithic housing formwork.

Given these factors and the intensifying competition, it is not surprising to find that manufacturers are now offering a packet of value-added services to enhance their market share. A good example can be found in the form of products and services that Doka India offers. The company offers a comprehensive range of services that combine with its products to make high-end complete solutions for every formwork project. Doka’s formwork services like consulting, planning, and ancillary services help the customers to achieve effective implementation of their formwork assignment with the products commencing from project development, tendering, operation scheduling, execution, and completion of shell construction. The company, which is associated with several prestigious projects including Palais Royale in Mumbai where according to it plywood waste was done away with by introducing an all-plastic, 100% wood-free facing, which is repairable, recyclable and never needs replacing, while delivering superior concrete finish, contributing its might to sustainable construction practices.

Latest formwork systems enable speeding up construction work. A good case in point is the TAC Formwork System offered by TAC System Formwork Sdn Bhd. The system consists of aluminium panels which are pre-designed according to the architectural plans to form all the concrete found in the building superstructure, such as the walls, floor slabs, columns, beams, stairs, window hoods, and curved structures. The TAC System is flexible, lightweight and suits all building types without the need to rely on heavy cranes and other heavy construction equipment. Usually one ‘set’ of TAC equipment for a typical project would consist of several thousand individual pieces of aluminium sections. According to the company the equipment can be dismantled and be used repetitively for up to 250 repeats and enables construction of building at the rate of 4 to 5 days per floor compared to 10 to 15 day with conventional systems.

Kumkang Kind is another company that offers cutting edge of formwork technology. The company’s range of formwork includes aluminium formwork, gantry formwork, system formwork, and climbing formwork systems. The climbing formwork system offered by the com-
pany is not only used on high-rise buildings, but also in mega projects such as bridges, dams, highways, tunnels, stadiums and airport control towers. Kumkang Kind additionally offers precise technical drawing support, along with additional support in the form of rigorous supervision at jobsites. The scaffolding systems from Kumkang Kind are made up of high-strength steel materials with a special galvanizing method to reinforce their durability, making them ideally suited for a variety of construction projects.

Manufacturers are focusing on R & D efforts in order to cater to the rapidly evolving Indian customer. Sparkonix for example offers a range of formwork systems that have designed keeping in mind diverse construction requirements. One of its innovative products is 'Geotub Round', which is exclusively meant for round columns and which can be conveniently handled on site, reused, and stored. Similarly, its 'Geotub' Rectangular and Rectangular are lightweight, modular formwork systems that can be reused. 'Geopanel' systems from the company are used for walls and foundations, among others. The 'Geosky' slab system from Sparkonix is a form of plastic formwork used to pour concrete slabs. Thanks to its combination of main beam and sliding wedge, this innovative system makes setup and dismantling faster. Some of the other products of the company include, 'Modulo', 'Elevator' water tank slabs, 'Skydome' and 'Skyrail' formwork systems.

The spurt in high-rise projects has come as a shot in the arm for formwork and scaffolding manufacturers. Almost every leading name is offering automated climbing systems these days. The range offered by Ulma Construction, a top name in fray for example, consists of its advanced self climbing formwork systems which come with a host of salient features including, cylinder workload 100KN, wide & protective platforms, roll-back arrangements up to 70 cm using track and gear mechanism and with possibility to be adapted to complex wall geometries, to mention only a few.

One more name that offers a wide range of formwork is Paschal India, which manufactures multipurpose “Modular” Formwork for verticals and the ‘e-deck’ System for the slabs. The company’s modular formwork system is being used in several parts of the world on different sites where it has demonstrated its versatility, adaptability, and flexibility for foundations, walls, shafts, round walls, columns, beams, etc.

The fact that what has been scratched is just the tip of the iceberg is driving manufacturers to continuously follow trends and come out with innovative products and services. Maini Construction Equipments Pvt Ltd (MCE), another well known player in the field, for example offers a complete range of aluminum formwork systems right from designing, manufacturing, erection to the complete site support. The company offers a range of steel scaffolding including cuplok systems, props, spans, metriform, wall form, and tailor made formworks etc.

It has become imperative for manufacturers to invest in R & D to develop new products catering to rapidly evolving market. Formwork ‘H’ Beams from Nav Nirman Beam Technics is a good case in point. Formwork ‘H’ Beams are very cost effective and easy to handle in column formwork, wall formwork, slab formwork, and scaffolding systems.

Turning Point Ahead

While the Indian formwork and scaffolding industry is headed in the right direction, there are still certain important challenges that need to be surmounted. Increasing awareness on safety and quality issues is of paramount importance. Codes and stipulations need to be discussed and newer guidelines keeping in tune with the times that we live need to be implemented. The increased emphasis on sustainability has meant that the use of automated formwork systems would increase quite rapidly in the near future. This presents another challenge in the form of availability of skilled manpower to operate these systems, a factor that potentially can make or mar the industry. The continued emphasis on infrastructure development is a good omen for the formwork industry. With the reforms push of the government expected to pick up steam and yield results by the end of the year, formwork, and scaffolding equipment manufacturers need to brace themselves up for an increasingly demanding Indian customer, who wants nothing but the best in the world.