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GR Infra enhances pavement performance with warm-mix technology

Hot Mix Plant GR Infra

Combining Warm-Mix Asphalt (WMA) and Reclaimed Asphalt Pavement (RAP) offers a significant improvement in pavement performance.

Ratan Lal Kashyap, Sr. Vice President – Procurement, G R Infraprojects Ltd.

The highway projects in India are adopting new techniques and technologies to achieve desired targets at budgeted cost, says Ratan Lal Kashyap, Sr. Vice President –Procurement, GR Infraprojects Ltd. He adds, "The competition among industry players are getting intense and everyone is in the race to create an edge to earn the bids and make profit. The plants and equipment acquired are smart and future ready which gives and edge to produce the future required mixes and also the cost of operations are lower compared to convention plants and equipment."

The latest equipment are with self diagnostic tools and also can be accessed remotely for fault finding and repairs, the productively and cost operations can also be retrieved remotely from the machine. This had brought in better controls and meticulous monitoring leading to better life and optimum utilisation of plant and machines. "The latest machines help us use of reclaimed material from road which leads to save environment and less emissions of toxic gases and material to environment. Road making machineries are designed with international standard and display the global technological breakthrough in construction industry. The main aim of using such machineries is to provide Indian infrastructure a new face and better connectivity to each other," informs Kashyap.

Warm-Mix technology

As per Kashyap, the greatest technology breakthrough of 2016 has been the Warm-Mix technology. The use of foaming technology for production of Warm-Mix has been one of the latest inductions in the industry of asphalt mixing and GRIL (G R Infraprojects Ltd) claims to be the first company to induct this in the hot-mix plant. This technology termed as Warm-Mix was conventionally done by adding chemicals produced by various MNCs. Now, recently the company has inducted an attachment termed as profimix by manufacturer which foams the bitumen many times its actual volume leading to better coating with base material having better workability and long life of the roads built. As this mix can be produced at a low temperature, it leads to low fuel consumption and minimal emissions on burning of fuel and also regulates hazardous emissions while laying pavement at high temperatures. This mix can be transported to longer distance as it retains its workability at a lower temperature also as compared to conventional asphalt mixes. This technology with industry perspective if this is implemented by other industry players, this would reduce the cost of production due to less fuel consumption and help overcome strict environmental regulations being laid by the government from time to time.

Achieving improved concrete performance

Explaining on the value addition to the business by using the technology Kashyap shares, "Use of Reclaimed Asphalt Pavement (RAP) over a period of time due to high volume requirement of aggregate and sand, mining will be a challenging affair for any EPC contractor or concessionaire. Off late it has been observed that most of the highway projects are of rigid pavement which requires high volume aggregates and sand. This concern has compelled us to think on reclaim of existing materials available on road. By using milling machines we have been able to reclaim the RAP which contains reusable aggregate and bitumen to a percentage of 2.5 to 3 per cent."

He adds, "RAP can be further screened and reused in our future ready hot-mix plant which helps RAP at the driedrum and mixes directly to the tune of 35 to 40 per cent. This technology has reduced the environmental damage and also brought in commercial advantage to the EPC contractor and concessionaire. Also, the foaming technology which is now an integral part of the hot-mix plant has leveraged the RAP mixing quality along with virgin aggregate of bituminous Asphalt."

Kashyap also mentioned that the company has been very open in adopting the new successful technologies used worldwide to set a benchmark in Indian construction industry. Combining Warm-Mix Asphalt (WMA) and Reclaimed Asphalt Pavement (RAP) offers a significant improvement in pavement performance. The recycling of existing asphalt pavement material for making new pavements results in considerable savings in financial and material resources.