

BIGGEST IS THE BEST

Patel Infrastructure acquired the world's largest concrete paver from Wirtgen Group. The 18.75 m full paving width paver is currently working at the Vadodara-Kim Expressway project.

The world's largest concrete slip-form paver has been formally commissioned on February 25, 2020 at the construction of 8-lane Vadodara-Kim Expressway, a part of the Mumbai-New Delhi Expressway. Patel Infrastructure bought this huge machine from Wirtgen India to construct the 31-km Karjan-Bharuch stretch of the Vadodara-Kim Expressway. There will be four such machines working at this project, according to the company sources.

The SP-1600 fully automatic slip-form concrete paver from Wirtgen has a full paving width of 18.75 m with a capacity to pave 6 m per minute. The paver comes with automatic dowel and tie bar inserter and texturing and curing compound spraying attachment.

Arvind Patel, Managing Director, Patel Infrastructure, said, "The idea behind the acquisition of the world's biggest concrete paver was to maintain the highest quality of paved surface in terms of line, level and compaction. This paver can pave the entire width of 18.75 m at one go to achieve the smoothest riding quality of the surface. Paving concrete at a rate of 1.5-2.0 km per day at full width joint-free provides a perfect smooth surface ensuring a smooth travelling experience on the expressway."

According to him, the laying process with this paver can save half of the time compared with an ordinary 9 m paver in which paving the full width has to be done in two segments, bringing in economy and efficient execution.

On utilising the biggest concrete

paver at the project, Patel said, "To cater the project requirement of paving approximately 3.5 lakh cu m concrete in a span of two years, it was essential to make use of such equipment. We did a trail patch of more than 380 m as per the Ministry of Road Transport and Highways (MoRTH) guidelines and achieved the average paving speed of 3.5 m/minute. The speed outperforms all other paving of four-lane highway with shoulder at one pass."

At the inauguration of the biggest paver, Ramesh Palagiri, Managing Director and CEO, Wirtgen India said, "Today is the proud moment for Patel Infrastructure and Wirtgen Group with the commissioning of the first 18.75 m width single-pass paving with our SP-1600 slip-form paver. We have done several projects in India for 15.75 m paving but this is the first time





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in the world that we are doing 18.75 m paving in a single pass with this machine. Today, we have done a successful inauguration of this machine and we will have four such machines working at this project. We are really able to exhibit our expertise in not only supplying and commissioning machines but also in providing total solutions for both concrete and asphalt roads.”

Ashutosh Gautam, Regional Officer and Chief General Manager-Gujarat, National Highways Authority of India (NHAI), added, “This expressway project being a part of the Delhi-Mumbai corridor is an important project in India. In the Vadodara-Kim expressway, there are five projects already going on with a total length of around 125 km. This project is the third with a length of 31 km and is being constructed at a cost of about Rs 18 billion with a completion period of two years. With these ultramodern equipment, we are likely to complete the project on time. All the five contractors have taken up the work in full swing. The quality is maintained to the utmost limit and projects are supervised by leading

consultants in India. I wish all the success to this project.”

The Wirtgen Group has extended full application support for this paver. Their onsite support team ensures smooth operation at the jobsite. In addition to this, original spares can be supplied with a minimum turnaround time. The Wirtgen Group is ideally placed with regard to offering the integrated service support to customers with regards to not only supplying the most innovative machines in the market, but also backing it with an experienced application support team.

Equipment used

Patel Infrastructure has also acquired a 240 cu m/hr capacity concrete batching plant from Schwing Stetter to fulfill the mass requirement of high-grade concrete in PQC (requirement of more than 3.45 lakh cu m of concrete for laying of highway part only) as well as additional requirements in all eight-lane mega structures. Other equipment employed at the project include tippers, DLC pavers, transit mixers, excavators and backhoe loaders, boom placers and

stationary concrete pumps, graders, soil compactors and tandem rollers, hydra cranes and other utility vehicles.

The project

Patel Infrastructure is constructing the part III of the eight-lane Vadodara-Kim Expressway from Km. 292.000 to Km. 323.000 section (design length ~31 km) in Gujarat under NHDP-VI (Phase IA package III) on hybrid annuity mode. Patel Infra was awarded the concession by NHAI under competitive bidding process and has subsequently incorporated a special purpose vehicle, Patel Vadodara-Kim Expressway (PVKEPL), to undertake the execution of the project.

This package of the Vadodara-Kim Expressway starts from Km 292+000 and ends at km 323+000 (31.00 km) between Karjan to Bharuch town of Gujarat. The entire length falls in Bharuch district.

The project was awarded on March 8, 2019 and the scheduled date of completion of the construction is March 7, 2021. The maintenance period will be till March 6, 2036 (15 years from the completion of the construction period).

