CASE STUDY

Gammon, one of the largest construction and infrastructure giants was able to reuse their existing ElectroMech cranes to build one of the longest flyovers in Pune.





he handling challenges at the Empire Estate flyover project faced by Gammon Since Gammon planned to construct

this flyover usingprecast segments, they set up a casting yard at a nearbylocation in Chinchwad. For this project, handlingrequirements existed at two places. First, at the segmentcasting yard, and the other, at the actual site of the flyover, tolift and place the precast segments on the pillars. At bothplaces, cranes were expected to handle heavy and bulkyloads, while performing

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round the clock. It was essential tomatch the speed of production of precast segments and theconstruction of the flyover in order to meet the stipulateddeadlines of the project. This requirement also obviouslymeant the synchronisation of handling capacities and speedsof cranes at both the locations.Gammon intended to check the possibility of reusing existingcranes which were used on its earlier projects, with theintention of reducing project cost and procurement time fornew cranes.

Solutions from ElectroMech

The ElectroMech project team together with the engineersfrom Cranedge – our service subsidiary carefully studied the new requirements and analysed the condition of the existing cranes available with Gammon. After this elaborate exercise, we narrowed down the selection to 3 existing cranes which would be able to meet the new requirements with alterations and refurbishing.

Two Gantry cranes were planned for the segment castingyard. They were to cover the entire casting yard process, which includes positioning the moulds for the manufacture of precast structures, pouring concrete into theprefabricated steel moulds and finally, placing the finishedprecast segments on the despatch trucks. The first cranewas a 60/12MT, 19.5m span gantry crane with 15m height oflift. This was used to handle the heavy moulds and finishedproducts. The second crane was a 15MT gantry crane with a19.5m span and 12m height of lift. This was mainly used forhandling the supporting structures during manufacture of precast structures. The third crane was planned at the construction site of themain flyover. This was a 60/12MT gantry crane with 28mspan and 15m height of lift to be

used to build the first phaseof the flyover. The crane traversed along the length of theentire path of the flyover, lifting precast segments from thetruck and placing them on the pillars. Precision positioning of the precast segments was made possible by using VFD drivecontrols that enable a high level of accuracy. This crane wasalso provided with a 12 MT auxiliary hoist which was used to install and dismantle all the supporting structures for the flyover as well as the concrete structures.

ElectroMech Cranes - Cost-efficient solutions For construction companies, it is the norm to write off thecost of their capital equipment such as cranes in a singleproject. This, of course directly affects the profitability of theproject. Conversely, being able to reuse their cranes foranother project offers a huge advantage in terms of profitability, a scenario that several of ElectroMech'sconstruction clients have been able to benefit from.ElectroMech cranes have proven themselves to be rugged, reliable and long-lasting. Several EPC companies use themover the years on a number of projects - one after the other.Admirably, we have reconfigured and modified ElectroMechcranes for several of our clients prior to shifting them to theirnew project site to ensure optimal performance.For this project too, Gammon reused ElectroMech cranesoriginally supplied to them 2009 for the construction of abridge over the Godavari river. Through careful evaluation of the existing cranes and assessment of new requirementsbased on our previous experience on similar projects, wewere able to help Gammon reuse these assets. This helpedGammon to substantially reduce project cost and turnaround time of the project.

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