

Tata Projects Completes Tunnelling To Ensure Lucknowites Travel In Comfort

HYDERABAD, India, March 6, 2019: As the switch is powered, the engine stutters to life making a purring sound. Slowly but steadily, this mole or tunnel boring machine moves ahead cutting through everything in its path - from hard rock to sand. The mole consists of the rotating cutting wheel, also known as cutter head, followed by a main bearing, a thrust system and trailing support mechanisms. The operator handling the tunnel boring machines is an expert since the slightest error can damage the cutter head and lead to unnecessary delays and costs escalation. However, the manoeuvring of such gigantic moles many feet below the surface can be a herculean task. But, each day the mole inches forward creating a path from nothingness.



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This excavated rock or muck is thereafter transferred through openings in the cutter head to a system of conveyor belts. Aided by this system of conveyor belts or muck cars that runs across the length of the mole - the excavated rock or mud is evacuated and disposed.

However, as the mole inches forward it has to take care that the surrounding walls and ceilings don't collapse since it could lead to fatalities. Hence, the mole lays out concrete segments or C-sections around the circumference of the tunnel. This action supports the unstable tunnel walls and ceiling behind the mole.

There is also need for various support mechanism or equipment to ensure that the mole is able to efficiently move ahead. These support mechanisms include conveyor belts for evacuation of muck and rock, electrical systems to power the various machines and provide adequate lighting, dust removal and ventilation equipment, and transportation equipment to transport concrete segments or C-sections into the tunnels. In addition, the entire operation requires setting up of control room to minutely monitor every detail and ensure immediate remedial action in case of any mishap.

All this happened over the last 36 months, under the most bustling areas of Lucknow city such as Hussainganj, Sachivalaya and Hazratganj. The residents and local businesses did face minor hitches since a major project of this huge magnitude was being skilfully undertaken deep underneath the area. However, the TATA Projects and Lucknow Metro Rail Corporation (LMRC) took all measures to ensure that residents and local businesses faced minimal disruptions.

Mr Rahul Shah, Chief Operating Officer – Urban Infra, TATA Projects Limited, said, "We are proud to have executed this challenging project many metres below the surface. Executing such projects below the surface and within stipulated timeframe is an achievement since there has to be hundred percent synergy amongst the team. Our on-time execution without any interruption demonstrates our unparalleled engineering knowhow and shall certainly benefit the citizens of Lucknow."

In the next few days, Lucknowites will witness the opening of its new world-class 3.68 km Hussainganj-Hazratganj underground metro extension that passes through the heart of Lucknow. The lifestyle of the city's residents will improve and local businesses will receive a fillip. In addition, visitors shall comfortably visit Lucknow's renowned heritage structures while saving commuting time, which can then be spent on savouring mouth-watering delicacies such as Galouti and Tunday kebabs along-with steaming hot Lucknowi biryani.

However, let us also acknowledge and appreciate these unsung heroes from TATA Projects and LMRC who tirelessly worked many feet below the ground to build this world-class underground metro line before the allocated deadline. Their unceasing efforts to resolve all challenges over the last 36 months will be remembered for many decades ahead as Lucknowites commute on this world-class underground metro line.

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