

17 hours to climb 29 floors

The structure weighing as much as 150 elephants moved at snail's pace throughout Wednesday, up two of the tallest towers in town.

It was difficult to tell from the ground whether the 600-tonne metal skeleton of the hanging entertainment hub at Atmosphere was moving at all, but it did. Every half an hour or so the gigantic structure would cross a floor of the landmark address off Science City.

The metal structure that will one day house a luxury walkway in the clouds took almost 17 hours to be hauled up 315ft, which translates to around 1.6mm a second. The slowest snail in animal planet moves a shade faster, at 2.8mm a second.

Metro was under a yellow helmet at the construction site from dawn to see the engineering feat.



The preparation 1001 EM Bypass is buzzing with 250-odd workmen, a bunch of engineers and scores of onlookers at 6am, all waiting for a take-off signal from the chief architect.

As workmen check the cables that would pull up the mammoth structure, engineers run around to ensure everything is in place. A crew shooting the Forum Projects construction for National Geographic were move tripods and cameras from one place to another for the best view of the operation. The realtors are busy attending to their guests who got out of bed early to witness a special 'lift'.



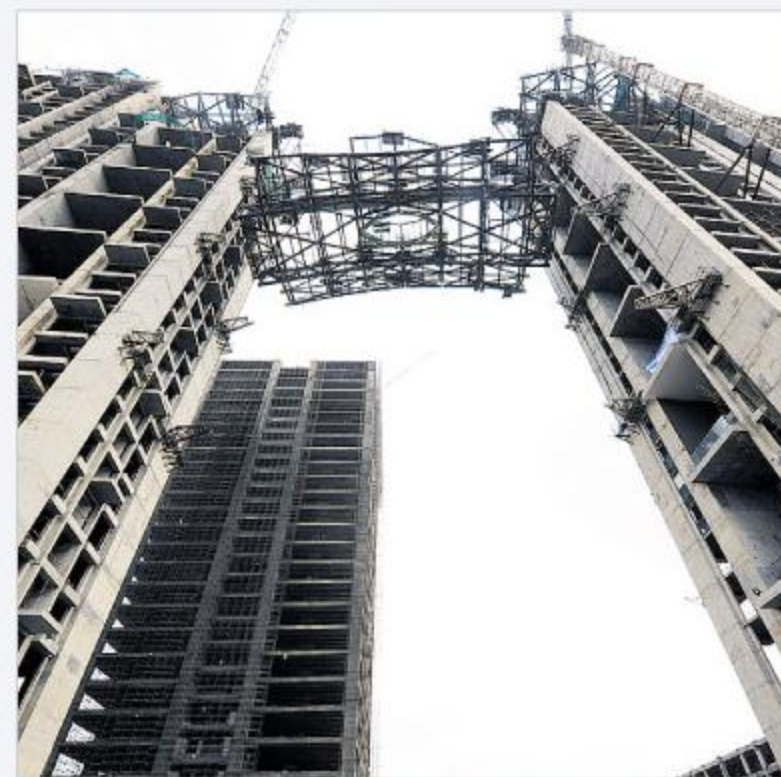
The pull The scheduled time of take-off is 6am but the engineers are not ready to start before all the safety checks have been completed. At 7.35am, the chief architect, Hossein Rezai Jorabi, comes down from one of the towers with a walkie-talkie in his hand and speaks to an engineer in the control room of the other tower to find out if everything is ready. The answer is yes. Jorabi asks everyone to back off and holding the walkie-talkie close to his mouth, utters the one word everyone is waiting to hear: "Lift".

The applause A sound like that of loud groan comes from the structure, which also starts swinging from side to side. Jorabi puts the walkie-talkie into his pocket and claps. "It's on. We have done it," he says as he high-fives the Forum Projects managing director, Rahul Saraf, who had thrown up his arms in delight when Jorabi signalled that the lift had begun successfully. Cell phones go click click and a group of workmen from Eversendai — the hands behind the world's tallest building Burj Khalifa in Dubai — are also seen taking out their cell phones and video recording the moment.

The crawl Despite the initial excitement, the crowd soon tires of the slo-mo.

The structure is being pulled by four jacks attached to the two towers, each carrying 30 cables, just like a chain-pulley system, explains an engineer. "The jacks act like the pulley while the cables are like the chain. With each heave, it is rising around 400mm. Then it is being rested for a few seconds before being heaved up again. If we pull it faster, the structure will swing, its centre of gravity will be displaced and it might come crashing down," says Jorabi.

Since the two towers are at an angle and not in a straight line, the strengths in the jacks are different. "Each of the two jacks on tower I are of 300 tonnes capacity while the two on tower II are each of 500-tonne capacity. We have to balance the weight and the angle while pulling up the



structure and be very cautious," adds Jorabi.

The jacks are controlled by computers from a control room on the 27th floor of tower II. While the realtors took guests up the two towers and on to the terrace for a bird's eye view of the city, floor 27 was out of bounds for everyone.

The metal structure rests on three makeshift iron structures named wind arrestors on the 11th, 17th and 23rd floors for at least half an hour each. "The structure is being parked at the wind arrestors to recheck if there is any displacement in the centre of gravity," says an engineer. The primary function of the wind arrestors is to hold the structure during the lift if there is heavy wind, rain, lightning or tremors.

It is 3.30pm by the time the structure is rested on 17th floor.

Final destination

Around midnight, the structure reaches the 29th floor, where, according to engineers, it will remain hanging on the cables for the next 22 days.

There is a one-metre gap between the structure — which is the middle segment of a composite construction — and the two iron structures (end segments) attached to the two towers. "We will weld the structure with the end segments to complete the composite structure. The work will take 20-22 days," says an engineer.

Everyone but the engineers and the realtors have left by the time floor 29 is reached. They erupt in joy. "It's like a dream come true," says an engineer, putting his phone camera in night mode to capture a frame of the hanging metal behemoth in the dark.