

An inspiration to the world

The deadly Corona Virus (Covid-19) has the world trembling in fear. Even the world's leading nations have been subjected to the silent attack of the virus. There have been thousands of casualties with a disheartening promise of more to come. In such strenuous circumstances, it is essential that the isolation and quarantine of the infected is done immediately to prevent the spread of the pandemic.

Putting aside all controversies and conspiracy theories regarding China's involvement in the origin and the spread of the virus, the country has set an excellent example in controlling the spread of the virus. Though the death toll was high and the atmosphere bleak, the government succeeded in containing the situation by effectively preventing its spread.

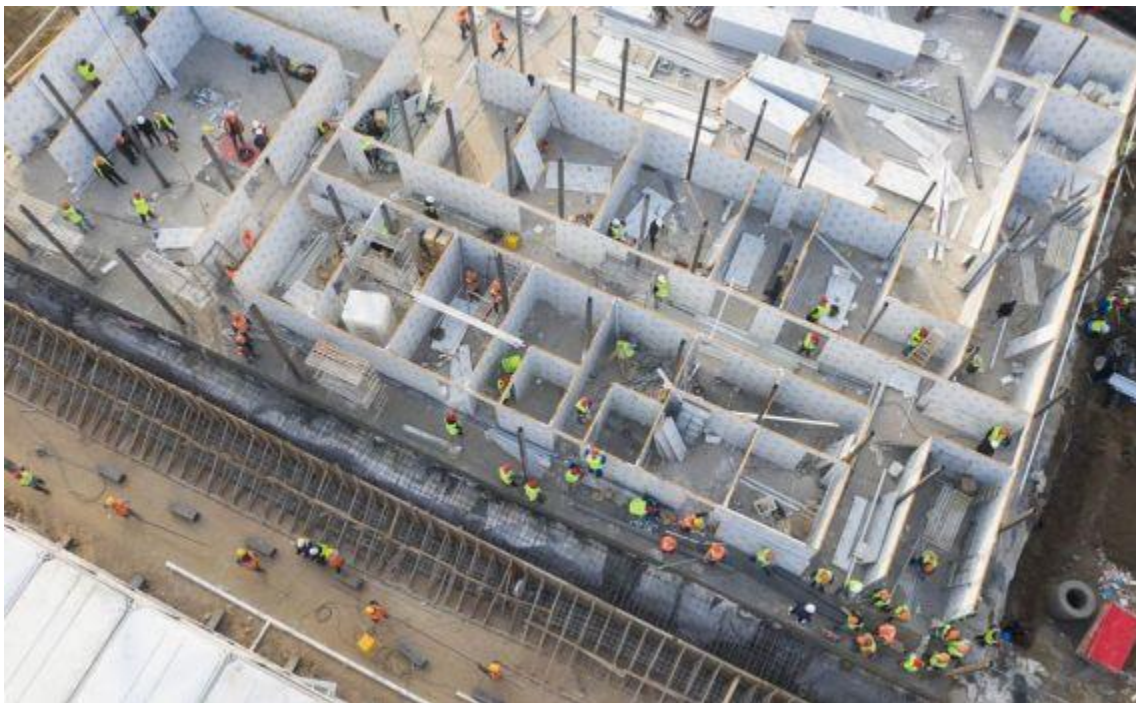
One of China's noteworthy actions in the management of the pandemic is the construction of the Huoshenshan hospital for treatment of the infected. Built in the Caidian District situated to the west of the city of Wuhan, the construction of the entire facility took only 10 days to complete. Boasting an impressive infrastructure of 2 storeys accommodating 1000 beds and having a completely controlled ventilation system, it is safe to say that the Huoshenshan hospital is a remarkable achievement in the field of Civil Engineering.



The location of the hospital was cleverly chosen- an empty field just off a pre-existing road. The field was in close range to the Zhiying lake and sufficiently far away from Wuhan, the epicenter of the virus, so as to prevent further transmission. The lake would meet the water requirements of the hospital without disrupting the existing water system and the road would behave as a parking lot during construction and provide easy access later when functioning as a hospital.

The construction of the hospital began on the evening of 23 January 2020 for a scheduled completion of construction on 3 February. Significant understaffing during the initial stages of construction caused the levelling of the site to take longer than expected. In the initial stage dozens of excavators, bulldozers and other earth-moving equipment prepared the ground in 48 hours. The foundation was layers of sand, a waterproof geotextile layer and plastic, with the sand at the very base being 20cm thick. Concrete was then poured on top to complete the foundation.

The superstructure of the hospital was modeled after the Xiaotangshan Hospital, which was built in the suburbs of Beijing in six days for the 2003 SARS epidemic. But according to an anonymous source, who asked not to be named due to the project's sensitivity, the design itself could not be copied like for like. "We re-designed the whole thing -- we couldn't use (the blueprint for Xiaotangshan) directly," he said on the phone from the construction site in Wuhan, adding that "terrain and design conditions are all different."



The buildings themselves did not take long to construct. The usage of already produced prefabricated elements played a key role in the quick construction of the hospital. The

assembling and fitting of the individual prefab elements together began on January 27th. Initially, the skeleton of the modular units, i.e. the floor, ceiling and structural supports at each corner, was constructed. It was of the likes of a 20 foot shipping container. Parallely, the basic utilities like sewage, water, electricity and internet were hooked up to the project.

January 28th saw the successful finishing of the foundation of the project. Over the 29th and 30th, the hospital began to take shape and form as the walls and ventilation outlets were fitted. The hospital was uniquely built with negative pressure in the ventilation system inside the quarantine areas so that the air only flowed through the exhaust, and not the door or any other opening, to effectively prevent the transmission of the virus.

Over the 31st of January and 1st and 2nd of February, the final areas of the complex were built and all the systems were tested to ensure that the hospital was safe for patients to be brought in. The military medical staff of the People's Liberation army immediately went to work and began moving through the hospital as the final touches were being given to the hospital.



February 3rd saw the Huoshenshan hospital receive its first patients, transferred from other facilities. It was a moment of pride and joy for all the people involved in the construction of this seemingly impossible project, especially the 7500+ labourers who worked day and night to make the design of the building come to life. Soon, the Leishenshan hospital with 1600 beds and 32 wards which was built in 12 days opened too.

China proudly stands as a country that made right decisions at the right time to control the deadly effect of the Corona virus. It inspires, encourages and stands as an example that new heights can always be reached with proper thought, plan and action.