

УДК 692

NEW TECHNOLOGIES IN RESIDENTIAL CONSTRUCTION

Д. О. ТКАЧЕВ, Г. В. ЧЕРНОГАЛОВ
Научный руководитель Е. С. ВЕРБИЦКАЯ
Белорусско-Российский университет

Housing shortages are a reality in many parts of the world, including Hong Kong, which is facing a major housing crisis due to a rising population, a high demand for accommodation, very high property prices, and land limited by the city's island geography. In 2017 Hong Kong was ranked as having the least affordable housing market in the world. James Law Cybertecture, a Hong Kong-based studio, is going to change that through the development of affordable micro-housing.

The firm recently built a prototype of the OPod Tube House, a concrete water pipe transformed into modular housing. Each 100-square-foot space is designed to house one or two people. The Opod Tube Houses have the standard features of any apartment a bed, space for a microwave and mini-fridge, and a bathroom area. A fully glazed front panel doubles as a door and window. Additional natural light is provided by lighting strips set under the shelves and a retractable lamp set into the wall.

The micro-apartment would appeal to “young people who can’t afford private housing” and who are looking for a temporary living situation. One of the most interesting features of the OPod Tube House is that it can fit almost anywhere, including narrow gaps between buildings, because each tube is only 2.5 meters wide. They can be transported to different areas, as needed. And, because they weigh 22 tons, installation costs are low.

They could be stacked up to four high. With some additional structure they can be unlimited, within reason. They can be lifted with a standard medium-sized crane onto a long trailer, allowing them to be moved with relative ease. They could also be arranged in low rise modular communities – the architect has developed plans that show the pipes arranged in a horse-shoe formation. The micro- apartments cost approximately £11,000 each to manufacture, and could be rented out for less than £300 a month. The average rent for a one-bedroom apartment in the center of Hong Kong is currently over £1,500. This project can’t be regarded as a permanent solution to the crisis, but this design could provide temporary relief for residents looking for something affordable.

The OPod project is currently still a concept, but the architect has built a prototype to show how a typical home could look. Inside the curved concrete walls, the home contains facilities for living, cooking and bathing.