
Lift-up Method for the Top Mast on the KLCC Tower, a Very High Building

The construction of the KLCC Tower No. 1 Building (Kuala Lumpur, Malaysia) was completed in 1997. The pinnacle (pinnacle) of the topmost section of this building includes a tower portion measuring 65.175 m in total length and weighing 170 t. The portion, the so-called pinnacle mast, was constructed by a jack-up method with step rods, a method developed by JFE Civil Engineering & Construction.

The strategy initially considered for the installation of the pinnacle mast was to divide the mast into sections of 10 t or less and stack them on the site with a 120 R tower crane (lifting load: 10 t). However, this stacking method would have required an outside scaffold in order to install the mast in the prescribed position. The work would have also been quite dangerous, taking place more than 400 m above the ground in frequently strong winds. And once the mast was installed, there would have been additional work to dismantle the outside scaffold and tower crane. As an alternative, the builders decided to adopt the jack-up method, a method requiring no outside scaffold. A temporary opening for jack-up was installed in the middle part of the building and an inside scaffold for welding was provided near the temporary opening¹⁾.

This report introduces the jack-up method for this pinnacle mast.

Project Name of the work :

KUALALUMPUR CITY CENTRE TOWER 1,
SHELL & CORE CONSTRUCTION WORK

Contractor :

MAYJAUS J.V. Hazama/J.A. Jones Co. (USA)
and others

Construction period : Feb., 1994 to Jan., 1997

Building : 6 levels under ground,

92 levels (88 stories) above ground

Building height : 451.9 m from the ground (eave height):

