ABSTRAC

The maximum lifting capacity of this tower crane is 6 tons with 8 metres length and 1.2 tons with 50 metres maximal reach length from the mast. Maximal height of lifting is 40 metres (assumed tenth floor building). The heavy of counterweight for making crane stability is 6 tons with arm length 14 metres.

Speed of crane lifting is 40 m / minutes and speed of rail traveling is equal to 44 m / minutes. Rotation speed for slewing movement is 0.7 rpm. Electric motor is used to drive the crane movement. For hoisting and rail traveling movements we use spur gears to reduce the movement speed. For slewing movement mechanism, V belt is used, spur gear with last unit in the form of planetary gear to do rotation movement.

Calculation of structure construction using Structural Analysis Program (SAP) 2000 version 8.08.