ERECTION OF LATICE TOWERS

here are four main methods of the erection of steel transmission towers which are described below:

1. Build-up method or Piecemeal method.
2. Section method.
3. Ground assembly method.
4. Helicopter method.

Build Up Method of Transmission Tower Erection

This method is most commonly used in India for the erection of 6.6 kV, 132 kV, 220 kV, and 400 kV transmission line towers due to the following advantages :

1. Tower materials can be supplied to the site in a knocked down conditions which facilitates easier and cheaper transportation.
2. It does not require any heavy machinery such as cranes etc.
3. Tower erection activity can be done in any kind of terrain and mostly throughout the year.
4. Availability of workmen at cheap rates.

This method consists of erecting the towers, member by member. The tower members are kept on the ground serially according to the erection sequence to avoid search or time loss. The erection progresses from the bottom upwards.

The four main corner leg members of the first section of the tower are first erected and guard

off. Sometimes more than one contiguous leg section of each corner leg is bolted together at the ground and erected.

The cross braces of the first section which are already assembled on the ground are raised one by one as a unit and bolted to the already erected corner leg angles. First section of the lower thus built and horizontal struts (belt members) if any, are bolted in position. For assembling the second section of the tower, two gin poles are placed one each on the top of diagonally opposite corner legs.

These two poles are used, for raising parts of the second section. The leg members and braces of this section are then hoisted and assembled. The gin poles are then

shifted to the corner leg members on the top of the second section to raise the parts of the third section of the lower in position for assembly. Gin poles are thus moved up as the tower grows.

This process is continued until the complete tower is erected. Cross-arm members are assembled on the ground and raised up and fixed to the main body of the tower. For heavier towers, a small boom is rigged on one of the tower legs for hoistin

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