

## 7. TRANSMISSION TOWERS

### 7.1 Introduction

In every country, developed and developing, the electric power consumption has continued to rise, the rate of growth being greater in the developing countries on account of the comparatively low base. This in turn had led to the increase in the number of power stations and their capacities and consequent increase in power transmission lines from the generating stations to the load centres. Interconnections between systems are also increasing to enhance reliability and economy. The transmission voltage, while dependent on the quantum of power transmitted, should fit in with the long-term system requirement as well as provide flexibility in system operation. It should also conform to the national and international standard voltage levels.

In the planning and design of a transmission line, a number of requirements have to be met. From the electrical point of view, the most important requirement is insulation and safe clearances to earthed parts. These, together with the cross-section of conductors, the spacing between conductors, and the relative location of ground wires with respect to the conductors, influence the design of towers and foundations. The conductors, ground wires, insulation, towers and foundations constitute the major components of a transmission line.