



Chapter – 3- Plate Girder

प्लेट गर्डर

एक निर्मित गर्डर जो क्रॉस सेक्शन में आई बीम जैसा दिखता है लेकिन इसमें एक वेब और फ्लेंज के लिए एक रोलड स्टील प्लेट होती है जिसमें आमतौर पर अकेले कोण या कोण और प्लेट होते हैं

A plate girder is a built up I-beam section, used to carry heavy loads which cannot be carried economically by rolled I-sections. It is made by riveting or welding the steel plates in I-beam shape. Components of a typical Plate girder and their functions are discussed in this article.

Components of Plate Girder

The components of typical plate girder are as follows :

1. Web
2. Flanges
3. Stiffeners

1. Web

The deep central vertical plate is called as a web in plate girder. It separates the two flange plates by a required distance. Web is responsible to resist shear developed in the plate girder.

2. Flanges

Flanges or flange plates are horizontal elements of plate girder which are provided at the top and bottom and they are separated by the web. The main purpose of flange plates is to resist the bending moment acting on the girder.

3. Stiffeners

Stiffeners are classified into two types :

1. Vertical Stiffeners
2. Horizontal Stiffeners



Vertical Stiffeners



Fig 3: Plate Girder with Vertical Stiffeners

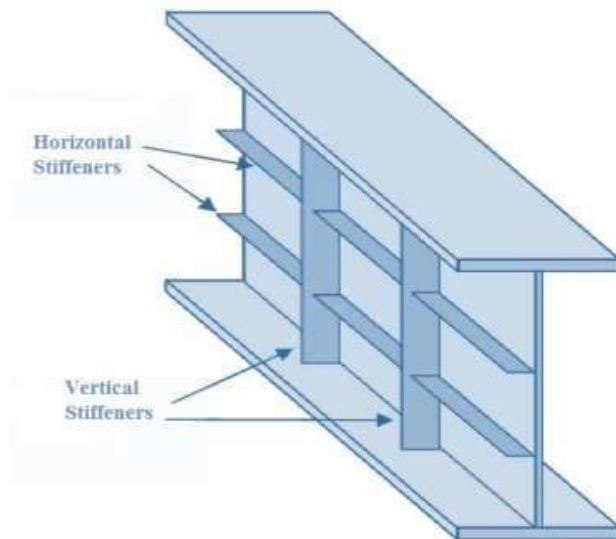
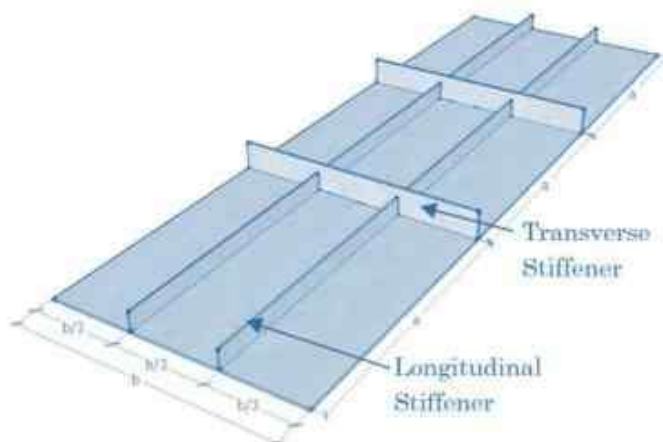
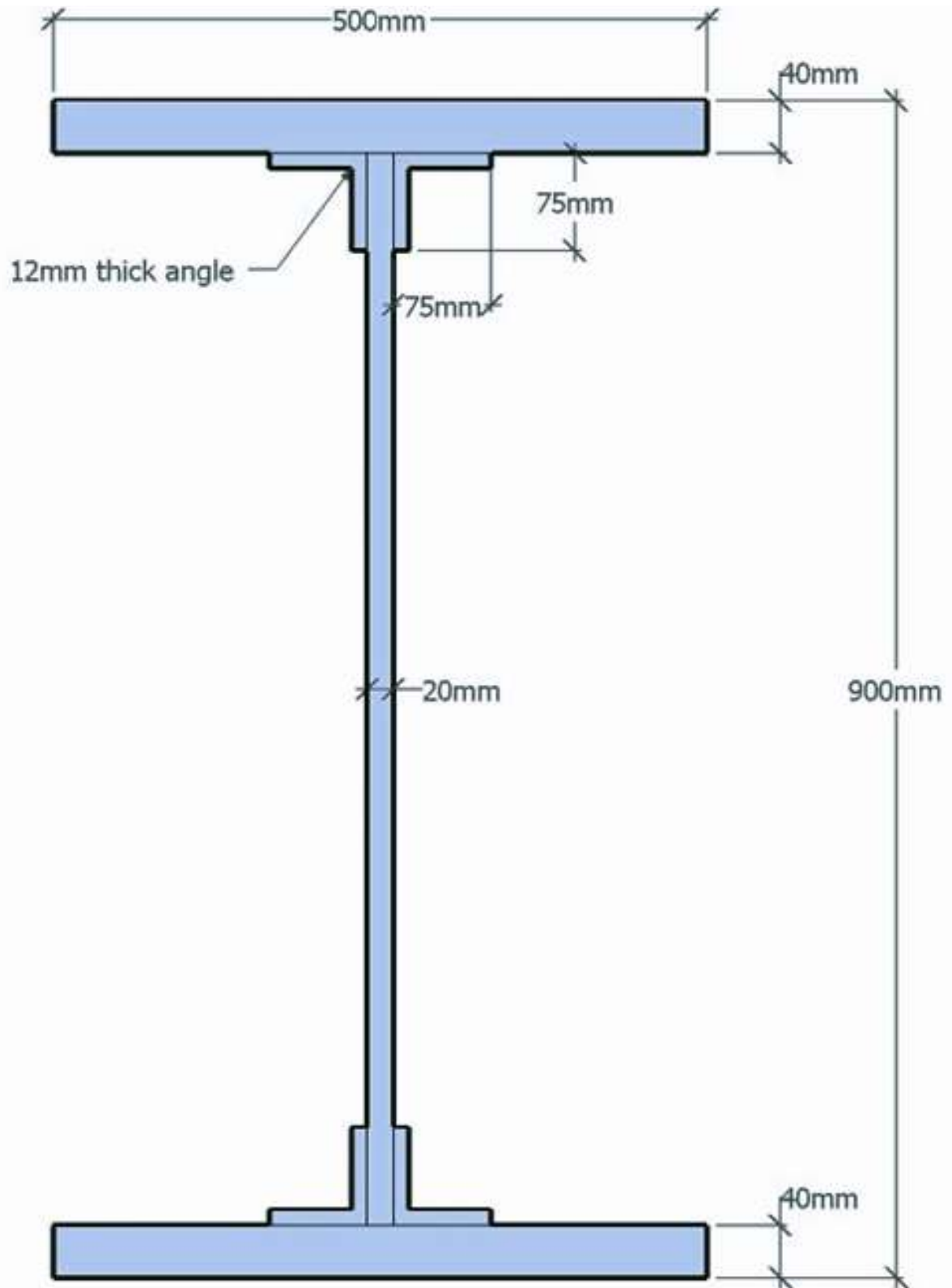


Fig 2: Stiffeners of Plate Girder

Horizontal Stiffeners







Typical Plate Girders

