

AS614 STEEL STRUCTURE

Objectives: This course focuses on the study of principles and the philosophy of advanced steel structures and their design.

Module- 1

Introduction – Structural system of building; Load path, loading std as per IS: 875 and load combinations; Rolled steel sections and built up sections. Welded and riveted connection-Failure modes.

Module- 2

Design of tension members; Concept of types of girders and beams; Design of laterally restrained rolled steel beams.

Design of compression members: Effective length, Buckling load; Built up sections, Lacing and Battening.

Module-3

Concept of types of foundations; Design of slab base and gusseted base: Concept of Plastic design.

References:

1. A.S Arya & J.L Ajmani, *Design of steel structure; Nemchand Brothers, Roorkee, 1999*
2. S.M.A Kazimi & R.S Jindal : *Design of steel structure, pentice hall(India), New Delhi, 1981*
3. S.N Singh, *Reinforced concrete design, Tata Mc. Grawhill, New Delhi, 1990*
4. Ramachandra, *Steel structure design, vol-1*
5. L.S Neggi, *Steel structure.*
6. *Steel Strucute* by V.N Vizarani & M.N Ratwani, *M/S Khana Publishing, Delhi*
7. *Steel Structure* by E.H Gaylord.
8. S.K.Duggal, *Design of steel structures, by Tata McGrawHill, New Delhi.*