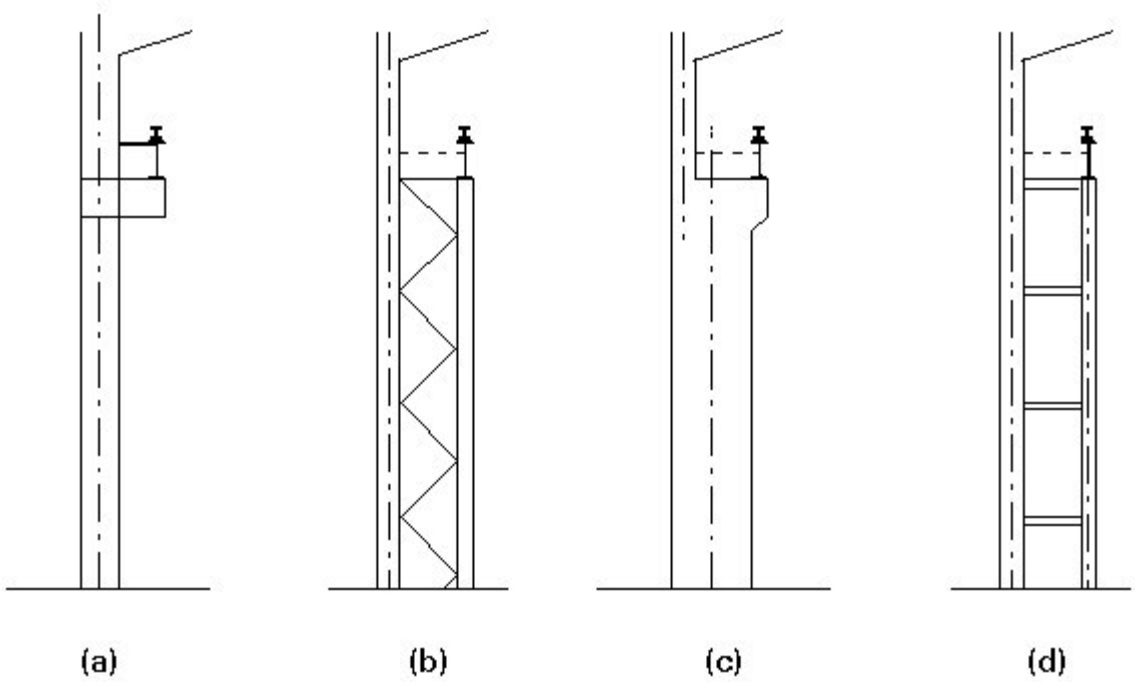
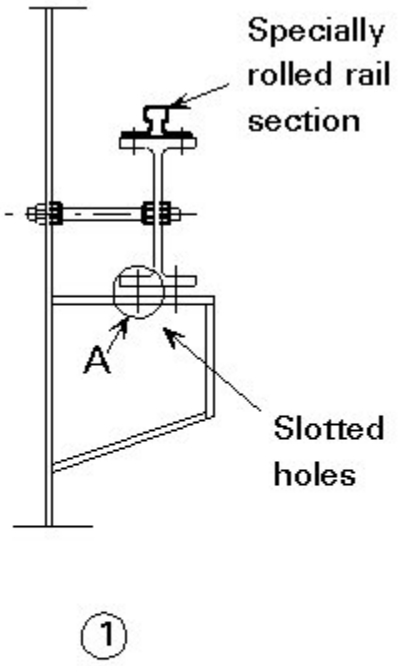
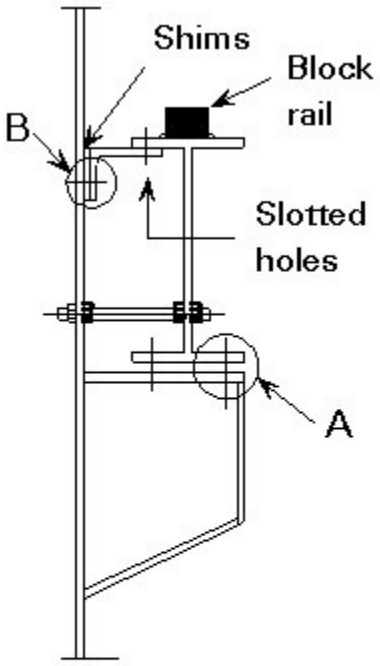


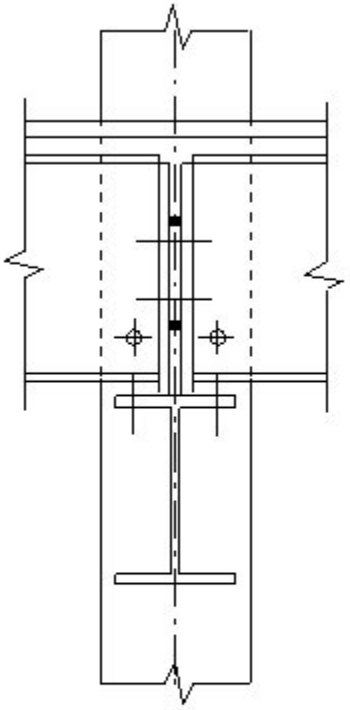
Figure 1 Crane columns

(a) Relatively light cranes

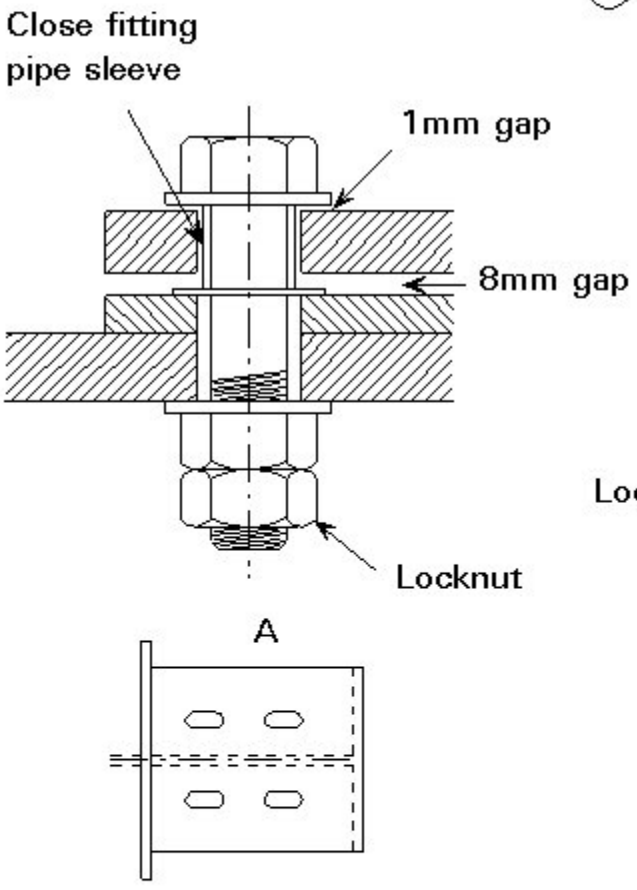
(b-d) Heavy travelling cranes

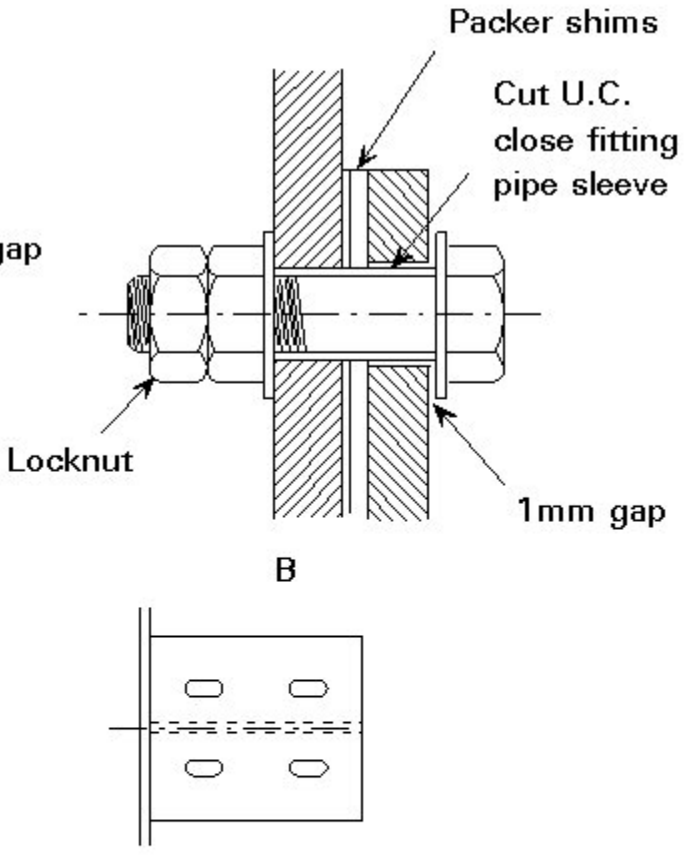






① ② ③





Slotted holes in bracket

Slotted holes in tie member

Figure 2 Seating for simply supported crane girders.

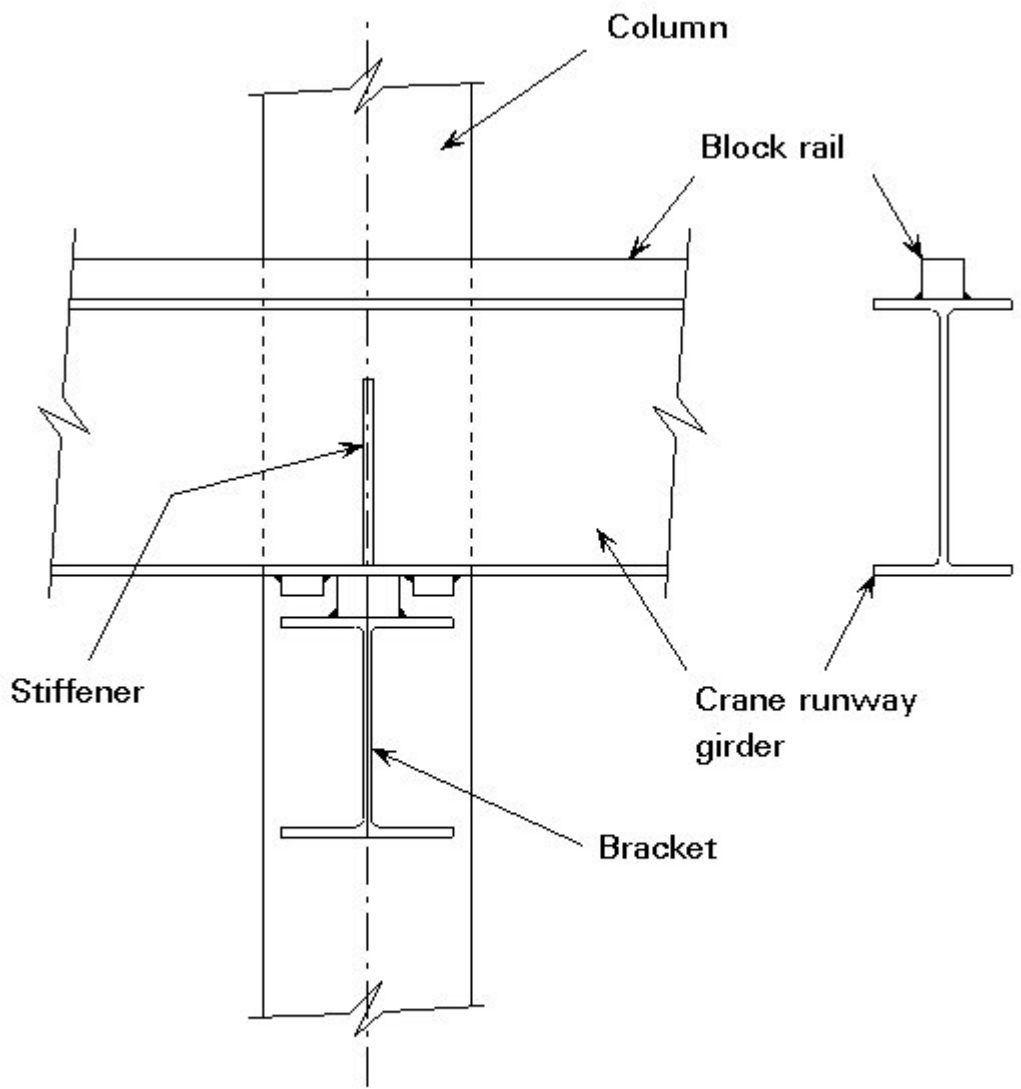


Figure 3 Flexible support of continuous crane runway girder on bracket.

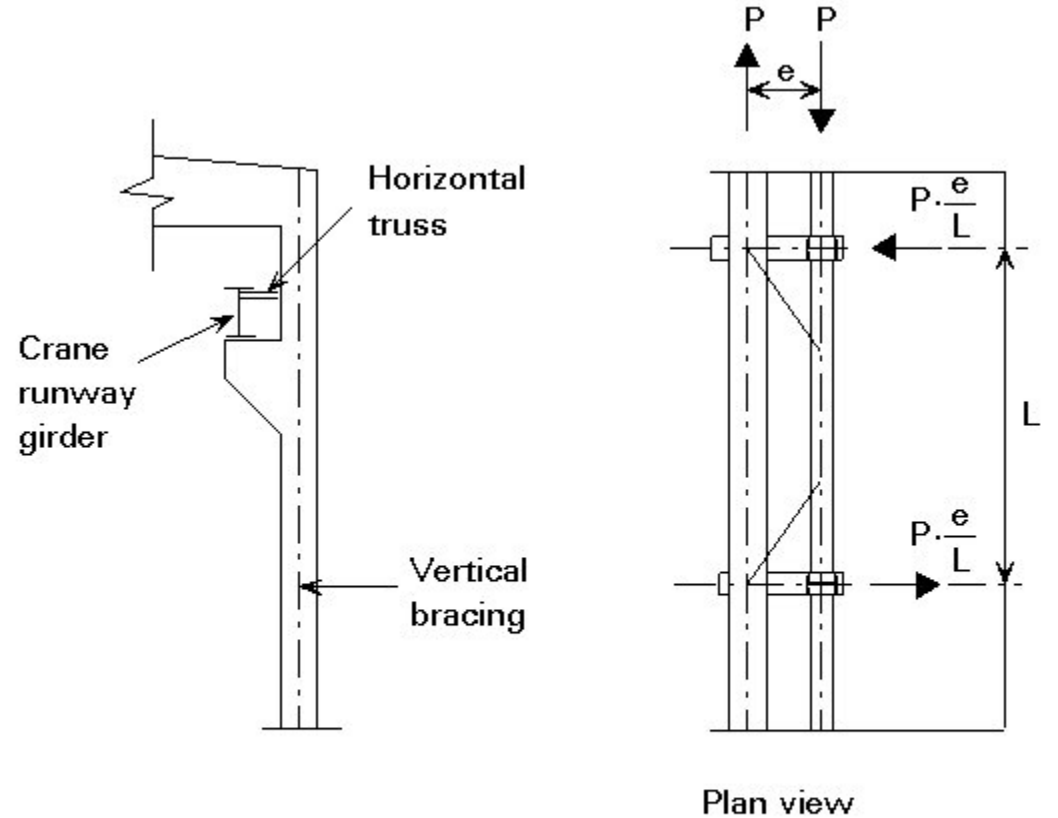


Figure 4 Horizontal truss to prevent torsion in the column.

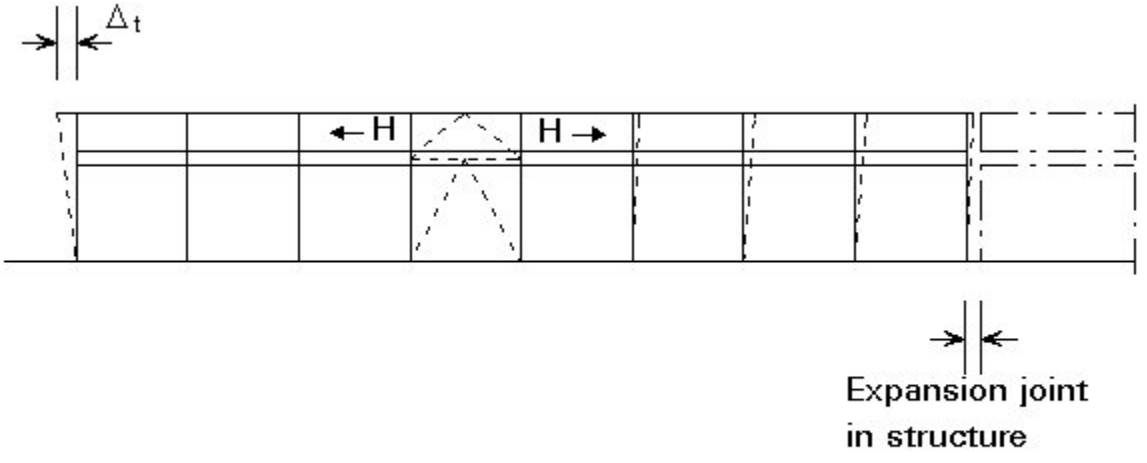
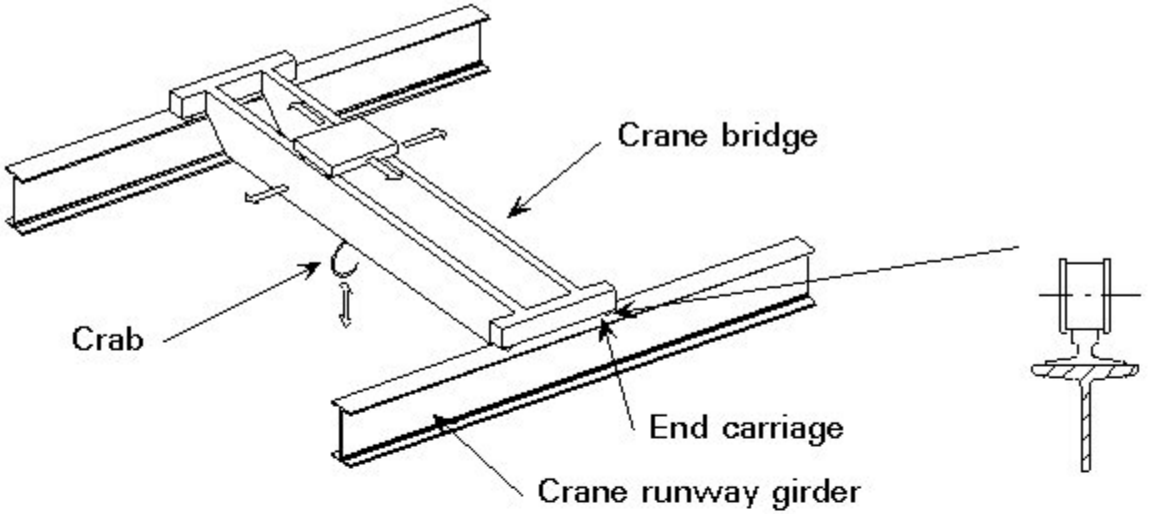
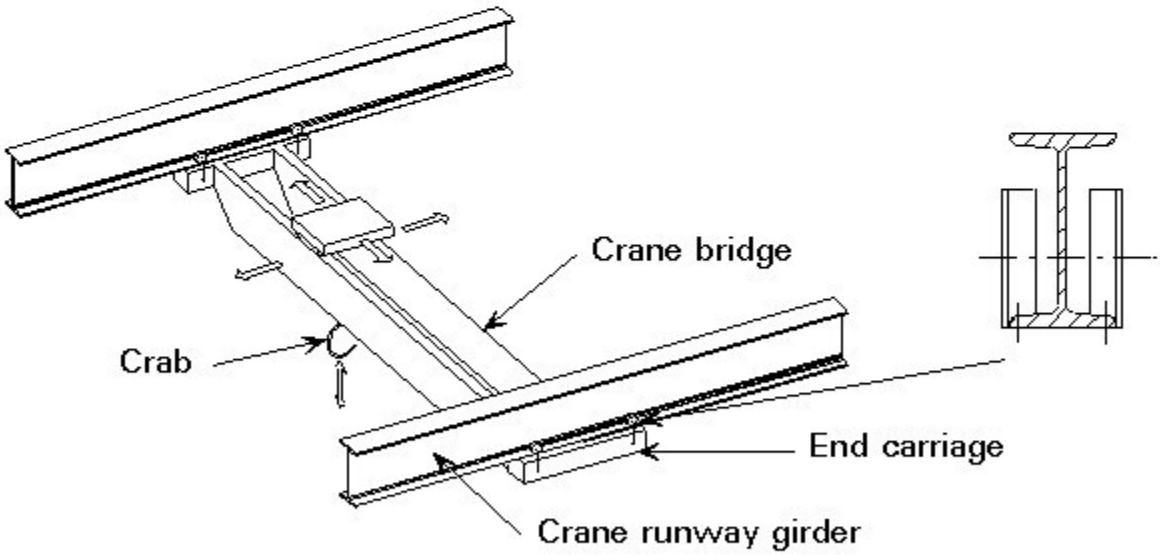


Figure 5 Expansion joints.



(a) Top running bridge crane



(b) Underslung bridge crane

Figure 6 Types of crane

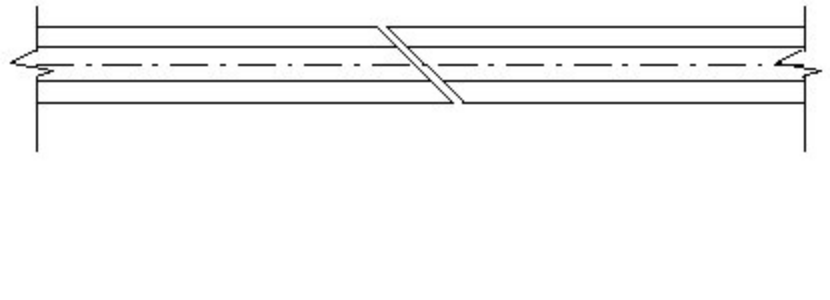
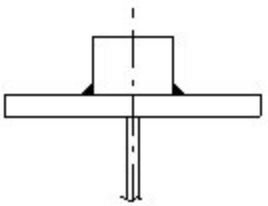
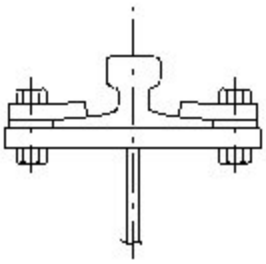


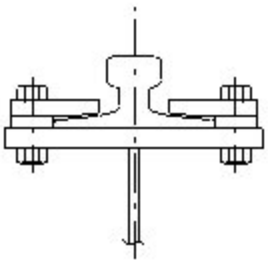
Figure 7 Rail bevelling.



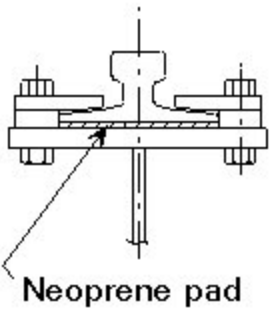
(a) Welded block rail on continuous crane runway girder



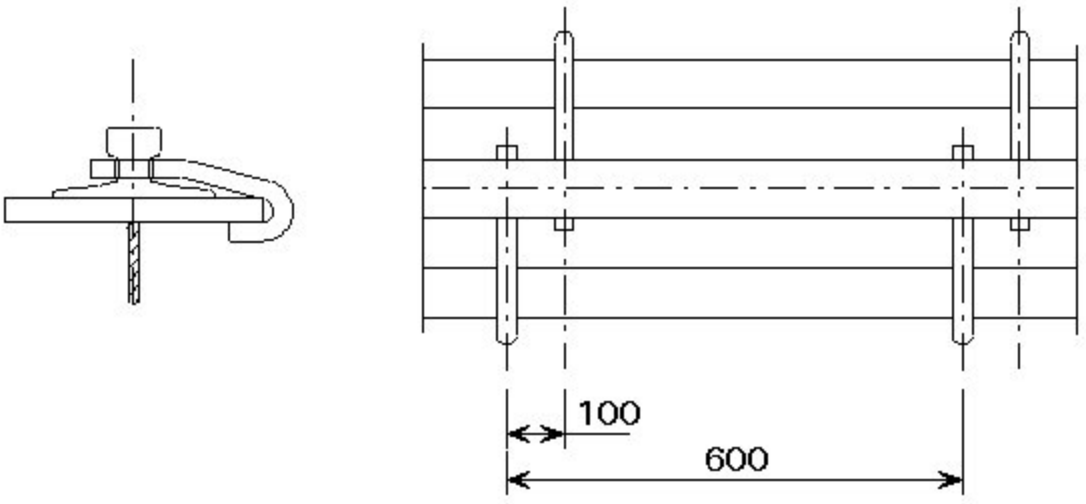
(b) Fully rigid



(c) Partial restraint



(d) Partial restraint with neoprene pad



(e) Hook bolts

Figure 8 Rail fastenings

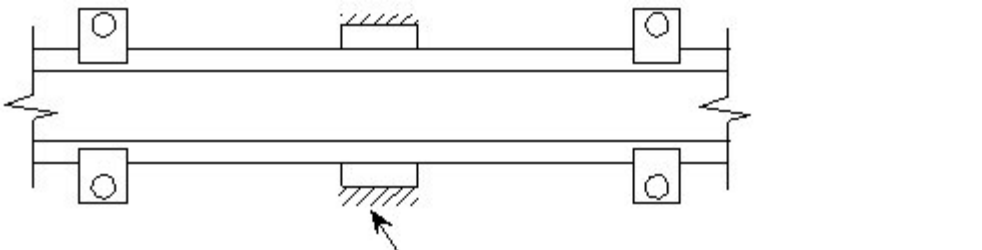


Figure 9 'Steering' plates

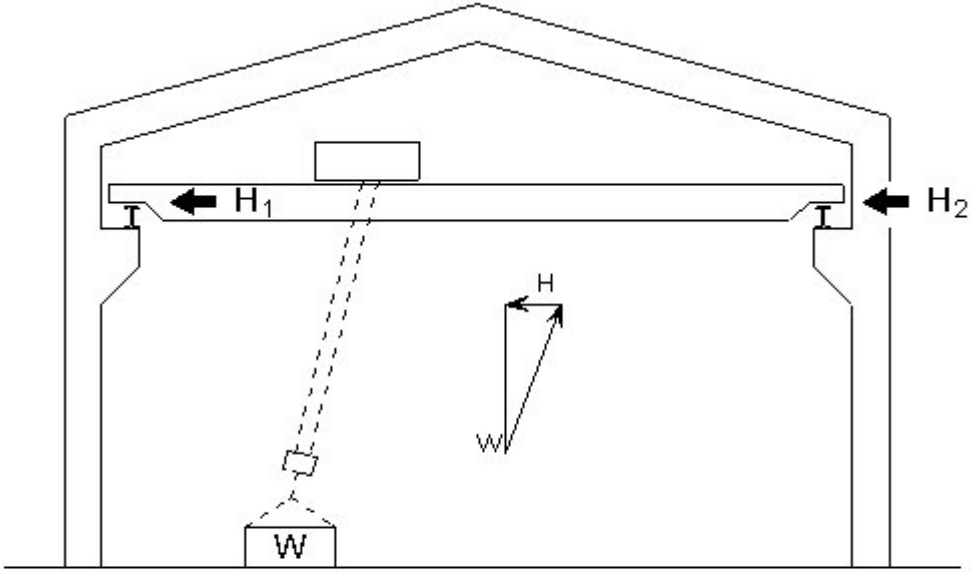


Figure 10 Off-vertical lifting.

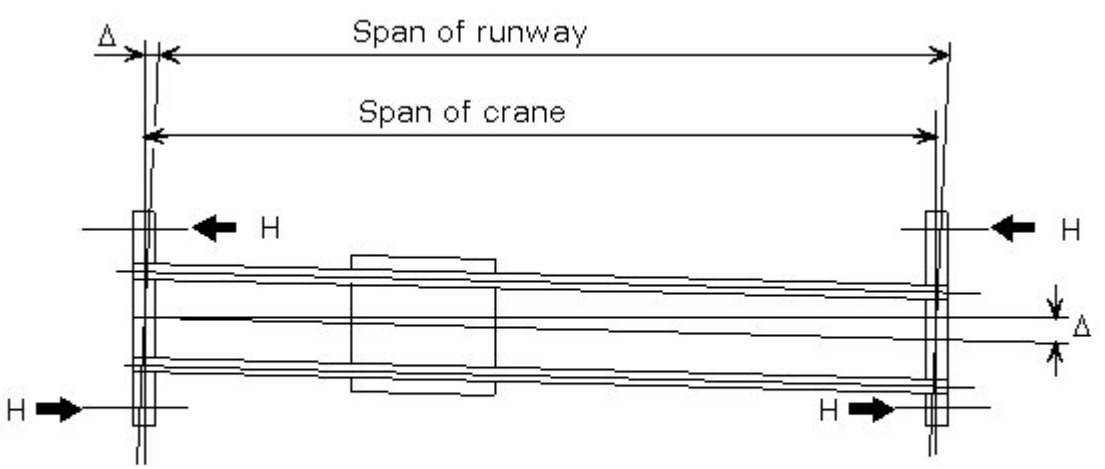
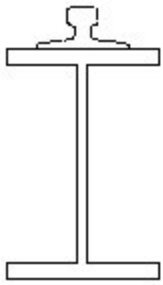
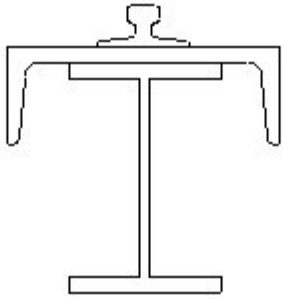


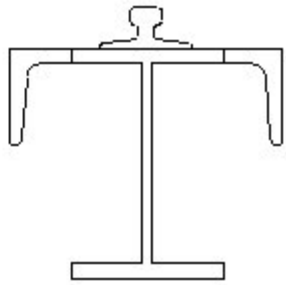
Figure 11 Oblique travel.



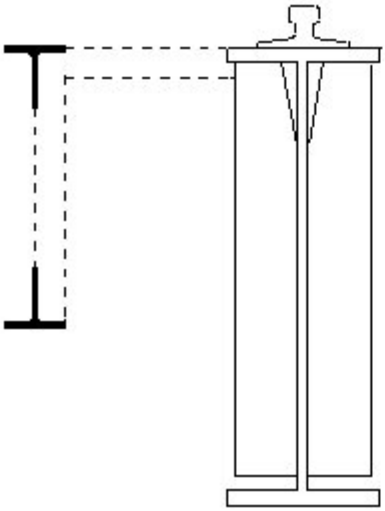
(a) Rolled girder



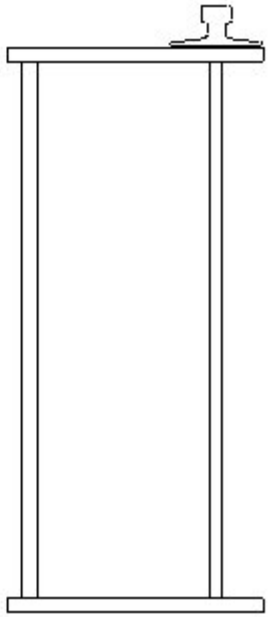
(b) Built-up girder



(c) Built-up girder



(d) Stiffened plate girder



(e) Plate box-girder

Figure 12 Typical sections of crane runway girders.

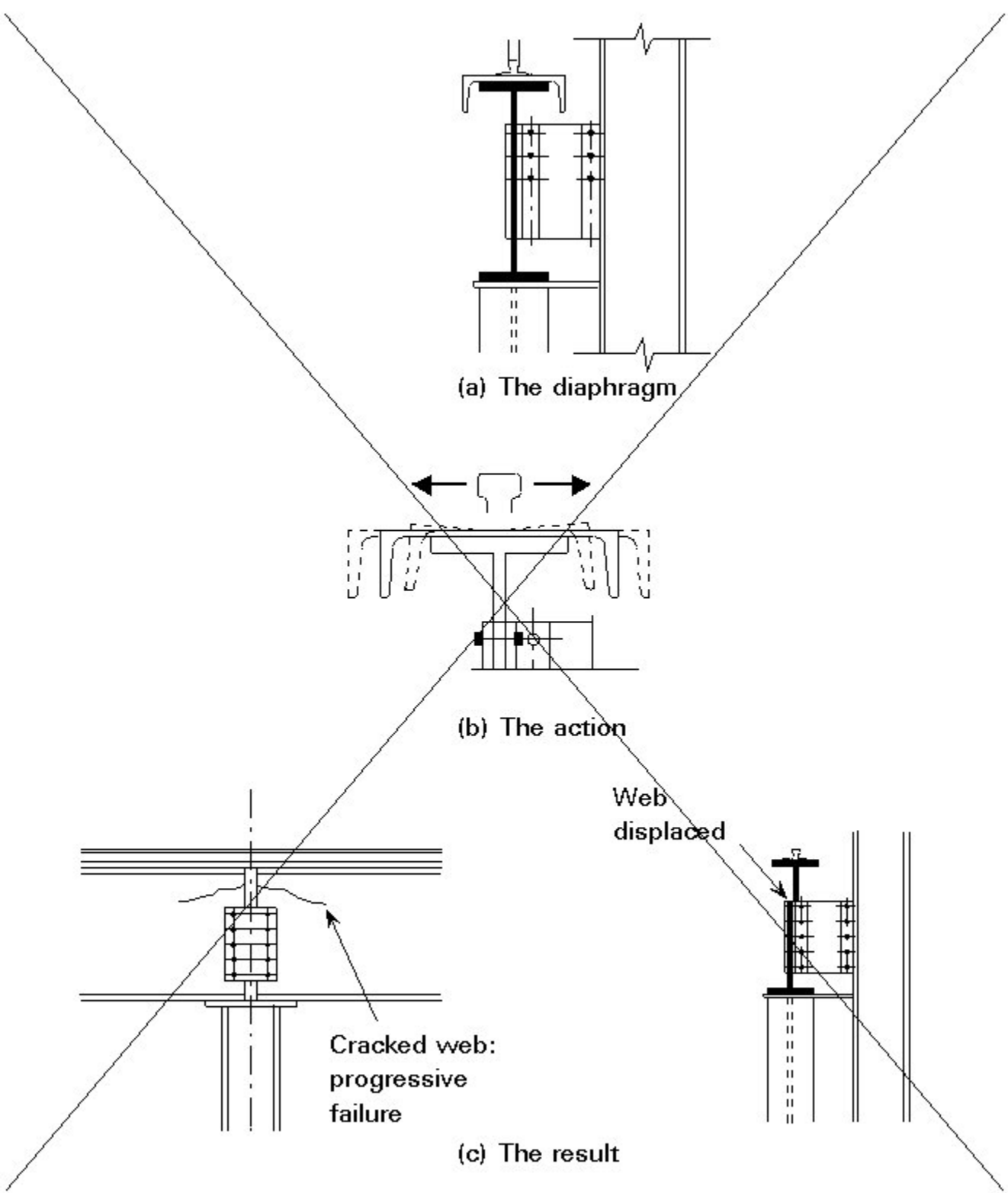


Figure 13 'Dangerous' connection for lateral forces.

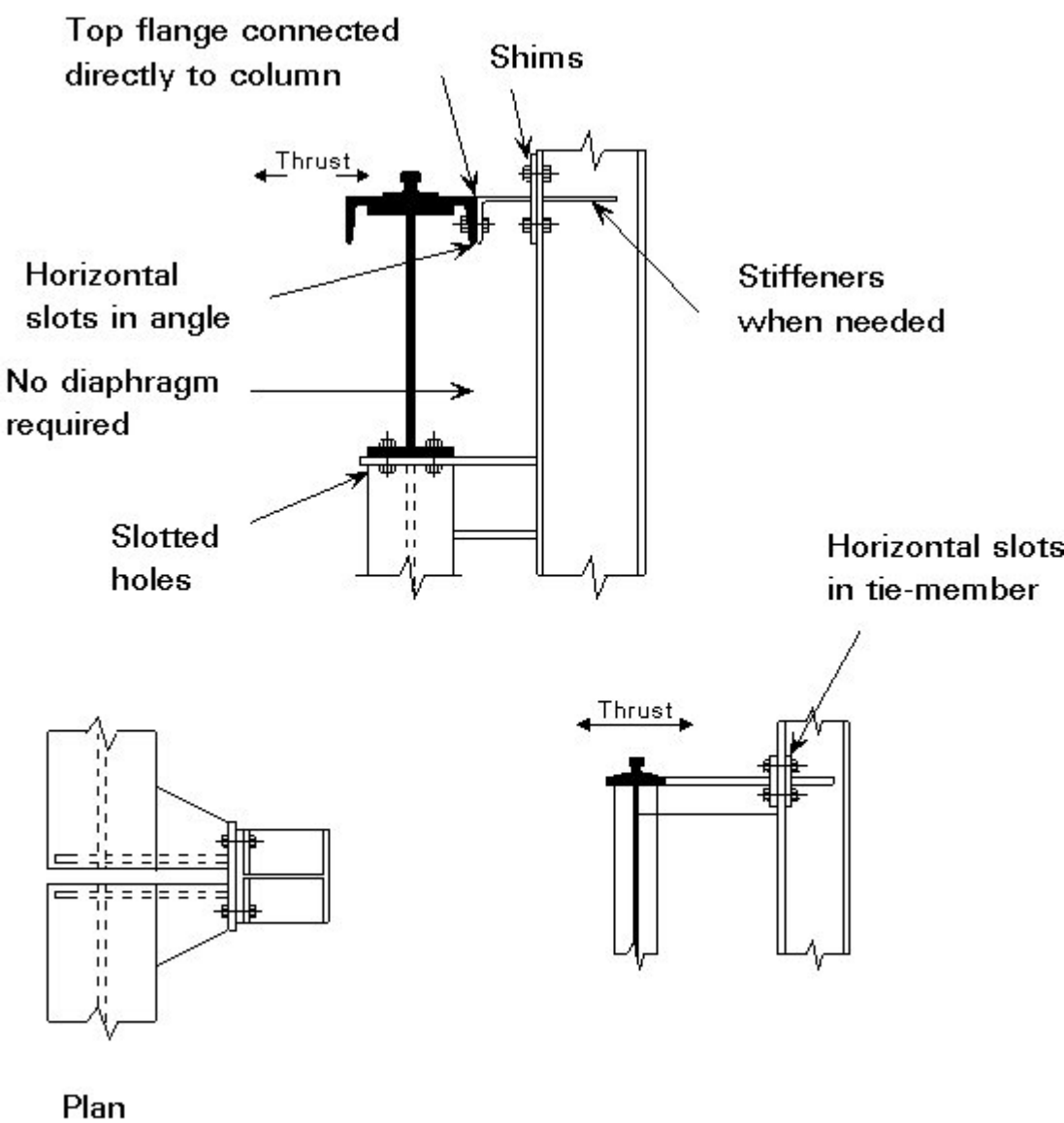


Figure 14 Top flange connections to column.

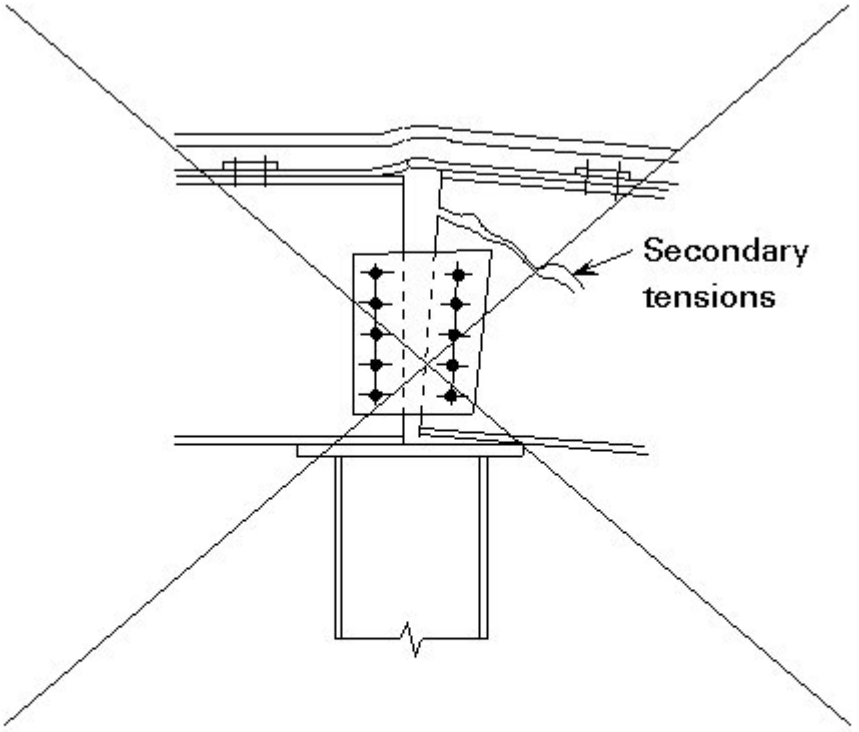


Figure 15 Local tension in the web adjacent to a diaphragm due to end rotation in simply supported girders

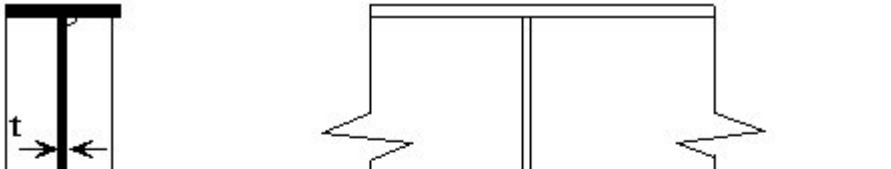


Figure 16 Web stiffeners with gap at the tensile flange

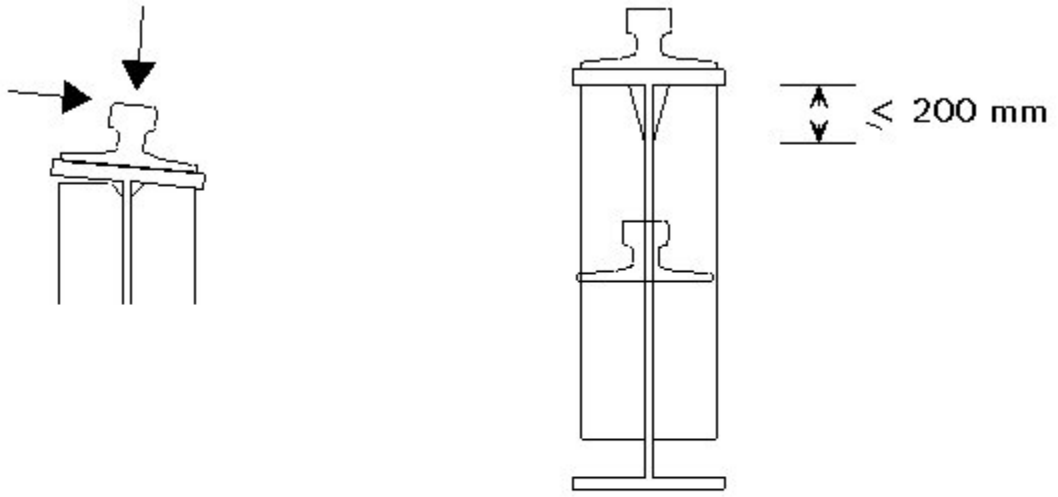


Figure 17 Web stiffeners welded to the compression flange