ORDINARY IRON HIGHWAY—BRIDGES.

and

\[ C = \begin{cases} 
5820 & \text{for two fixed ends;} \\
3000 & \text{for one fixed end and one hinged end;} \\
1900 & \text{for two hinged ends.}
\end{cases} \]

Where I-beams are employed for intermediate struts or end lower lateral struts, the working-stresses are to be taken from Table XL. For the flanges of rolled beams, the intensities of working compressive stress are to be taken equal to five (5) tons for bridges of Class A, and six (6) tons for bridges of Classes B and C. For the flanges of built beams, the corresponding intensities are to be four (4) and five (5) tons respectively on the gross section.

Working Bending-Stresses. — The intensities of working bending-stress on pins are to be seven and a half (7\(\frac{1}{2}\)) tons for bridges of Class A, and nine and three-eighths (9\(\frac{3}{8}\)) tons for those of Classes B and C. For pins belonging wholly to the lateral systems of bridges of either class, the intensity of working bending-stress may be taken equal to eleven and a quarter (11\(\frac{1}{4}\)) tons. The intensities of working bending-stress for rivets are to be seven and a half (7\(\frac{1}{2}\)) tons for bridges of Class A, and nine and three-eighths (9\(\frac{3}{8}\)) tons for those of Classes B and C. The latter intensity is also to be used for the lateral systems of bridges of Class A.

Where steel pins are employed, the intensity of working bending-stress must not be taken greater than twelve (12) tons for bridges of Class A, or fifteen (15) tons for those of Classes B and C, unless special experiments on the steel used show an ultimate bending resistance greater than sixty (60) tons per square inch; in which case a factor of five (5) may be used for bridges of Class A, and a factor of four (4) for those of Classes B and C. As before stated, the intensity of working bending-stress for channels in portal and lateral struts is to be six (6) tons.

Working Bearing-Stresses. — The intensities of working bearing-stress for pins and rivets, measured upon the projection of the semi-intrados upon a diametral plane, are to be six (6) tons for bridges of Class A, and seven and a half (7\(\frac{1}{2}\)) tons for those