ALLOWANCE FOR WIND PRESSURE ON BRIDGES IN INDIA.

In a recent number of the Indian Engineer some extracts are made from the rules for working stress on girder bridges, issued by the Government of India Public Works Department under date of December 13th, 1893. The rule regarding wind pressure is worded as follows :

1. The amount of wind pressure on a railway bridge is to be calculated on the assumption that the maximum normal pressure may be one and a half tons per 100 square feet of surface exposed. The surface exposed to be reckoned as follows :

(*a*) A train surface calculated on a height of 13 feet 6 inches on the 5-foot 6-inch gauge, or 11 feet on the meter gauge, multiplied by the total length of the girder.

(*b*) The actual surface (as seen in elevation) of that portion of one girder which may be below rail level, or at a height above rail level of more than 13 feet 6 inches on the 5-foot 6-inch gauge, or 11 feet on the meter gauge. Also,

(*c*) In the case of triangulated girders, the actual vertical surface (as seen in elevation) of that portion of the leeward girder which may be below rail level, or at a height above rail level of more than 13 feet 6 inches on the 5-foot 6-inch gauge, or 11 feet on the meter gauge.

2. The total wind pressure thus calculated is to be provided for by a proper system of wind bracing, or floorplating, and its effect taken into account as forming a part of stress on the chords of the main girders. Proper arrangements must also be made at the girder ends to secure sufficient stiffness to resist racking action where diagonal stiffeners are not used.

3. Wind pressure is to be treated as "fixed load" and its effect on the different members of the structure is to be allowed for as provided in the rule for "maximum permissible stress."