

General Loading Requirements and Maps (IEEE: Section 25 Loading for Grades B, C and D)

General

1. It is necessary to assume the loadings that may be expected to occur on a line because of wind and ice during all seasons of the year. These weather loadings shall be the values of loading resulting from the application of Rules 250B or 250C. Where both rules apply, the required loading shall be the one that, when combined with the appropriate overload capacity factors, has the greater effect on strength requirements.
2. Where construction or maintenance loads exceed those imposed by Rule 250A1, which may occur more frequently in light loading areas, the assumed loadings shall be increased accordingly.
3. It is recognized that loadings actually experienced in certain areas in each of the loading districts may be greater, or in some cases, may be less than those specified in these rules. In the absence of a detailed loading analysis, no reduction in the loadings specified therein shall be made without the approval of the administrative authority.

Combined Ice and Wind Loading

Three general degrees of loading due to weather conditions are recognized and are designated as heavy, medium, and light loading. **Figure 250-1** shows the districts in which these loadings are normally applicable.

Figure 250-1 shows the radial thickness of ice and the wind pressures to be used in calculating loading. Ice is assumed to weigh 57 lb/ft³ (913 kg/m³).

Extreme Wind Loading

If any portion of a structure or its supported facilities exceeds 60 ft (18m) above ground or water level, the applicable horizontal wind speed of **Figure 250-2**, as determined by the linear interpolation, shall be used to calculate horizontal wind pressures. These pressures shall be applied to the entire structure and supported facilities without ice loading. The following formulas shall be used to calculate wind pressures on cylindrical surfaces:

$$\begin{aligned} \text{pressure in lb/ft}^2 &= 0.00256 (v \text{ m/h})^2 \\ \text{pressure in pascals} &= 0.613 (v \text{ m/h})^2 \end{aligned}$$

where m = meters
s = seconds

Figure 250-2 lists the conversions of velocities to pressures for typical wind speeds as calculated by the formulas listed above. If no portion of the structure or its supported facilities exceeds 60 ft (18m) above ground or water level, the provisions of this rule are not required.

For Canadian customers, please refer to Annex A (page 251) for **Figure 250-1CDN** and **Figure 250-2CDN**.
For US customers, please refer to Annex B (page 252) for **Figure 250-1USA** and **Figure 250-2USA**.