The external pressure coefficients for buildings with rectangular cross section are given in Table 4.2. For roofs and all other types of structures they should be taken from Eurocode [1].

The internal pressure coefficients depend on the size and the distribution of the opening in the building envelope. A face of the building should be regarded as dominant when the area of openings at that face is at least twice the area of openings in the remainng faces of the building. External openings, such as doors and windows, which would be dominant when open but is considered to be closed during severe windstorm, should still be investigated as being open as an accidental design situation. Depending on the area of the opening at the dominant face, the internal pressure coefficients are calculated as a fraction of the external pressure coefficients by using the following rules:

If the opening has twice the area of openings in the remaining faces: $C_{pi} = 0.75 C_{pe}$

If the opening has at least three times the area of openings in the remaining faces: $C_{pi} = 0.90 C_{pe}$

where C_{pe} is the external pressure coefficient at the dominant face. When the openings are located in zones with different external pressure coefficients, an area-weighted average value of C_{pe} should be used.

The friction coefficients for walls, parapets, and roof surfaces are:

C_{fr} =0.01 for smooth surfaces (e.g., steel, smooth concrete)
C_{fr} =0.02 for rough surfaces (e.g., rough concrete, tar boards)
C_{fr} =0.04 for very rough surfaces (e.g., ripples, ribs, folds)

The friction area is the external surfaces parallel to the wind. For vertical walls, the friction area is the total area of walls parallel to the wind. For roofs, the friction area is the roof area located beyond a distance from the upwind eaves equal to the smallest of (*2 x frontal width*) or (*4 x height*).

To calculate the total wind loads in a building, the building is divided into horizontal segments as shown in Fig. 5.1 below. The wind loads for each segment are calculated separately by using the appropriate wind parameters at that height. The height of the segments cannot be bigger than the width of the building in the direction perpendicular to the main wind flow. It is assumed that wind pressures are constant across the width of each segment.