The starter values in the diagram $(q/b)/f_{md}$ are obtained by calculating the load per running horizontal metre of arch (kN/m) and dividing this value with the width of the arch (metres) and with the design value of the bending strength (N/mm^2) in the relevant loading. This is determined with regard to climate class, duration of load and, in relevant cases, safety class in accordance with the regulations applying in the particular case. See e.g. Annex 2.

The diagram is based on the assumption that the relationship between critical values of bending strength and compression strength parallel with the grain is 1,1 and that the relationship between the critical value of the modulus of elasticity in bending and the compression strength parallel to the grain is 370.

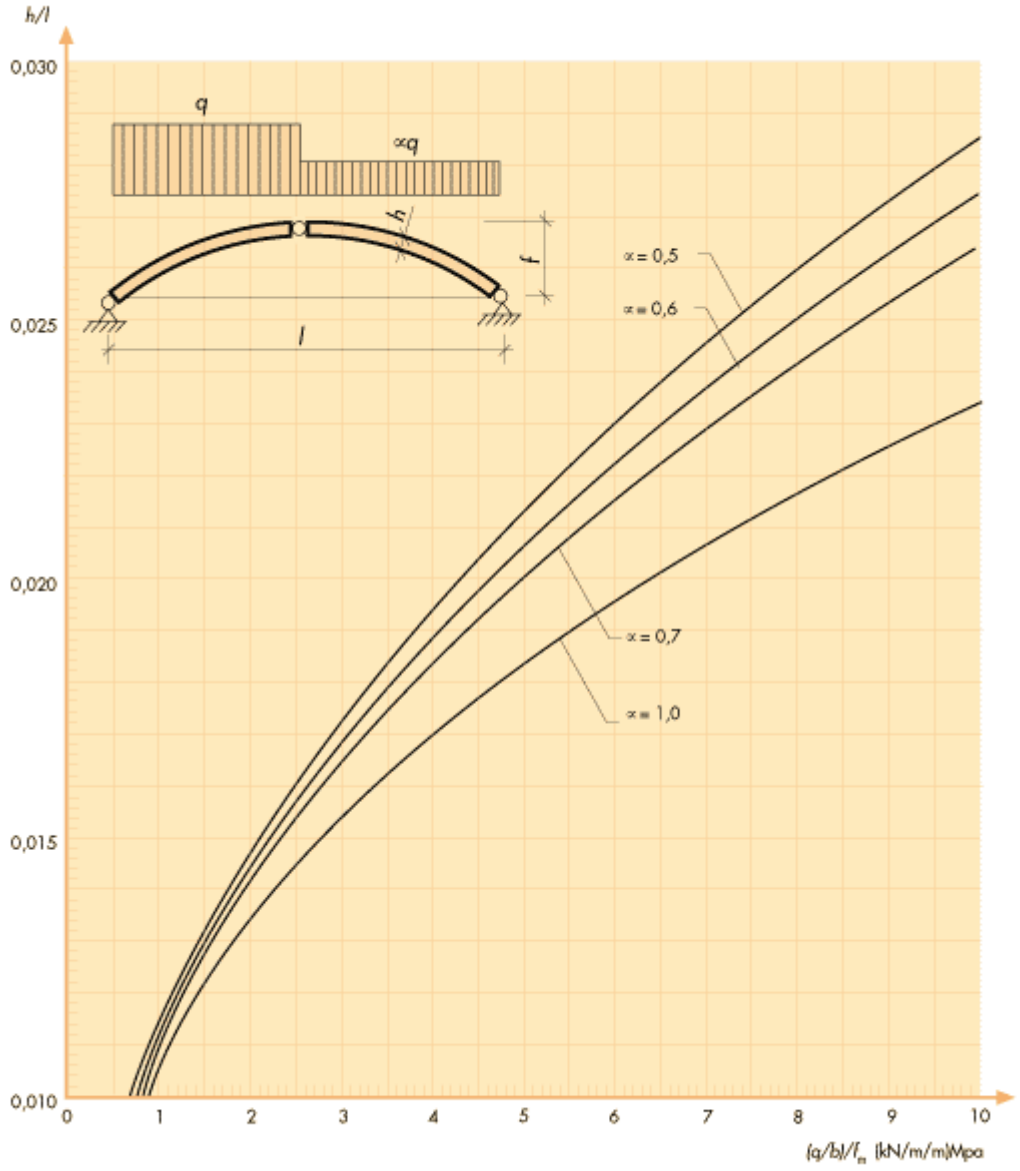

Figure 10.6 Diagram for design of 3-pin parabolic arch with reference to carrying capacity. The arch is assumed to be restrained from lateral buckling. Rise ratio of the arch f/l = 0,14.