

Interpretation of our string certificates „Prüfbericht“

Beside the technical and historical informations about wire production which you'll find at the beginn of the chepter music wire in our catalouge, we'll try to give some help for the interpretation of the certivicate „ Prüfbericht“:

The procedure of the wire examination is built in a way, that the wire is extended to the breaking point with a defined speed and on the other hand at the same time the expansion is mesured with an extensiometer. So it is possible to show the dependence of the various wire values.

Because of the different stiffness of the wire, depending to \varnothing and the alloy, there can be a dispersion in the different values of breaking point / elongations limit / yield strength (Bruch-/Dehn-/Elastizitätsgrenze). Still they refer to each other so that nevertheless a lower breaking point the capacityability can be enlarged because a higher elongations limit. At the recommanded max. power (**empfohlenen max. Kraft**) which is mainly around 60% one can observe that the elongations limit can rise nevertheless it got a low breaking point - or go down nevertheless a rising breaking point. The **empfohlene max. Kraft** tells the % of the loadablety of the wire without achieveing the area of deformation and whether the wire is drawn hard (big reduction steps) or soft (small reduction steps).

To make the practical evaluation easier the values are given in real string lengths depended to c^2 . For example: an iron wire \varnothing 0,972 mm, c^2 440 Hz and length 233 mm can be used as C with (c^2 233x2 = c^1 466x2 = c 932x2 =) 1864 mm length.

With the same material but a \varnothing 0,199 mm, c^2 bei 440 Hz and 322 mm , C theoretically could have a length of (c^2 322x2 = c^1 644x2 = c 1288x2 =) 2576 mm.

c^2 is given as reference tone to discribe scalings because they are more or less pure in this region (between $c^1 > c^2 > c^3$).

In generell it is to remark that all mesured values are bound to the respective materials load and the named draw on the data sheet. It is not to be excluded that there can be dispersions on the influence of smallest pollution in the material, alloy fluctuations or temperature fluctuations during the drawing process. Therefore there are beside the measured values the recommended values (**empfohlene ...**) for the practical work.