

SEBASTIAN STENZEL

CLASSICAL MASTERGUITARS

FROM A GUITAR MAKER'S NOTES:
GENERAL REMARKS ON STRINGS FOR THE CLASSICAL GUITAR
by Sebastian Stenzel

The tone of the guitar is obviously dependent on the strings used. It would be sheer nonsense to declare any particular type or brand of strings as the best. To choose the best strings, it is necessary to consider the two major masses coupling the strings: one the guitar itself, mainly the soundboard, the other the fingers (and fingernails) of the player. Both the elasticity of the soundboard and the muscle tone of the fingers have to be in the right balance with the tension of the strings. Tarrega once said about his favourite Torres guitar that it had "the ideal string tension." What he meant, I think, was that this guitar struck a perfect balance for him between string tension, elasticity of the soundboard and his muscle tone. A soft guitar soundboard will generally sound nicer with low tension strings, although the volume may be disappointing. A stiff soundboard, on the other hand, will need hard tension strings to be brought to the right "working point." Theoretically, this guitar would be louder, because more energy is put into the system when plucking the string. Often however, this additional energy is not sufficient to significantly improve the soundboard's vibration. A string that is too thick will not deliver a desirable sound. Its increased stiffness impedes its oscillation in the higher partial tones, resulting in a tone that tends to be rather dull. This can be most easily observed on the g-string, whose diameter is close to the upper limit, at least when nylon is used as material. But dimensioning and string material shall not be discussed here. I agree with the common opinion that medium or normal tension strings represent the best compromise, provided the player prefers beauty of tone and capability of modulation to mere power. It is a misconception that harder tension always gives more volume.

The use of carbon fluorid material has given a new impulse to the production of strings. It is with rare exception a real improvement for the g-string, not only for the transition from bass- to treble strings, but also for the intonation of the modern classical guitar. The extra compensation, which many guitar makers give to the g-string becomes unnecessary, provided the bridge bone is slanted. The other two treble strings have to be tested for each guitar and player. Generally it can be said that carbon trebles will sound better on a stiff guitar soundboard (see above) and for players with very soft nails, whose softer tone compensates for a piercing sound quality in the timbre to which carbon trebles contribute. Carbon trebles are said to lack modulation and warmth and on many guitars this holds true. However, they often superceed nylons in the higher frets. It is, once more, a question of personal preference.

As for the intonation (of the string!), one has to distinguish problems arising from changes in density along its length and problems caused from the string not being perfectly cylindrical. Whereas the former was a formidable problem in the time of gut strings, nowadays it is rather the latter which dooms many a treble string to the garbage bin after being played only minutes. This can be quite expensive. A non-cylindrical string disturbs the development of a clean oscillation and leads the string to flutter, easily causing a buzz. In extreme cases, this fluttering can be seen just by looking at the string after being plucked, but the ear will perceive even minute deviations. For bass strings, the dimensioning and choice of materials is certainly an art in itself.

SEBASTIANSTENZEL

CLASSICAL MASTERGUITARS

But again, this shall not be discussed here. It is the timbre of the string and its longevity which matter for the player. An easily avoidable problem is the common practice of rolling up the bass strings to fit them in handy packs. Unless the wire filament is wound really tight, rolling the string for packaging will separate the windings, if only slightly, thus decreasing the stiffness of the string which is necessary for an interesting range of overtones. (This may seem contradictory to what was said above, but a certain stiffness is desirable to achieve a pleasant spread of overtones.) It is probably only for economic reasons that guitar strings are sold in this way and unfortunately the same holds true for the overall quality of guitar strings. I see still some room for improvement here, e.g. in the use of rectified material. But such strings would of course be much more expensive, and the demand for higher quality is relatively small.

As a guitarmaker, I construct my instruments to fit medium-hard tension strings. This allows the player maximum leeway in string selection. In most cases however, I make the guitar for a specific customer, whose anatomy and style of playing tell me what piece of wood to choose for this player and how to work with it, striving to achieve this rare perfect balance that Tarrega mentioned.