

Power transmission engineering for Hi-Fi audio equipment (record players)

Initial situation

A small business specialized in the repair, maintenance and restoration of historic turntables. In the performance field, emphasis was placed primarily on the natural sound of the vinyl player. The already extinct industry made spare parts procurement of mechanical elements more difficult. A significant part of the sound of turntables took over the belt-driven flywheel. The manufacturer of the then installed flat belts could not be found out, the historic turntables threaten to disappear from the market since, among other things because the drive can no longer be supplied with original spare parts.

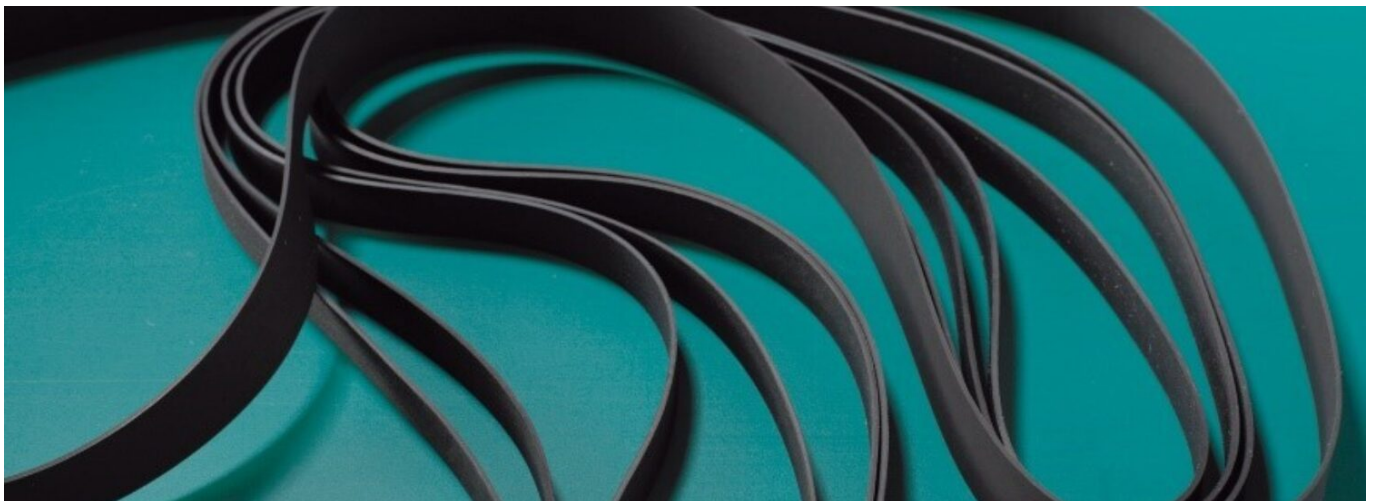
Task

The market-leading business owner comes with his task to the engineering team of Dipl. Ing. Werner Graf AG. The aim was designing a true-to-original replica of the historic flat belt type and combining it with the manufacturing quality used today.

Solution

The force/length measurement of the last original belt already in use on our "Zwick" test system gave us the information about the resulting preload and resonance. Combined with today's expansion forces which absorb much more power, results in a 3.8% longer flat belt identical width mass. The grinding of a slightly changed belt thickness attains the tonal subtlety of the musical experts. The result surprises even the experts:

I have tested the belt in the endurance test all week and I am pleased to announce that it outperforms our highest demands.



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