

Ultra SZ physical processing technology

The ultra SZ physical process, one of our big technologies, is our highly advanced and unique original physical processing such as cryogenic temperature and electromagnetic processing which changes the physical characteristics of material for its intended application without stress by bending or heat.

By carrying out this processing, the molecule cluster uniforms in structure as shown in the image figure 1-1, resulting in the smooth flow of electrons.

Moreover, the aluminum alloy uniformed by the ultra SZ physical processing as shown in the image figure 1-2 reduces sharply the high-frequency and electromagnetic noise affected from outside and

prevents harmful induction as well.

The character of material itself decreases to a limit and it can be said that the processing is advantageous also to a vibrating system not to mention a cable system.

This ultra SZ physical processing has been performed to all, such as a cable, internal wiring, a wall socket, and a plug.

Also, the ultra SZ processing has been employed to the airplane-grade aluminum alloy of a wall socket power plate or a super barrier tap.

Furthermore, this technology is useful also to the space development of a rocket, an artificial satellite, etc. which requires severe strength in durability and environmental change.

Image figure 1-1

The effect of the ultra SZ physical processing in a cable

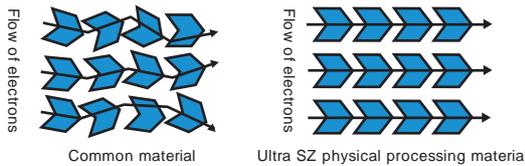
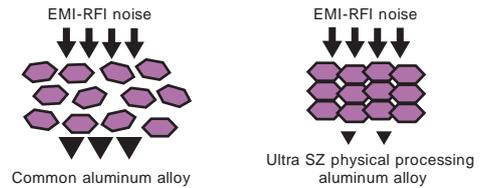


Image figure 1-2

The noise interception effect of the ultra SZ physical processing in an aluminum alloy



Audio-grade HR silica glass technology

The OPT series favorably accepted in the long-term seller of seven years have evolved still more highly efficiently.

The new material HR quartz used for the series is our audio-grade high-response, crystal-pure silica glass obtained by further refining silica glass most ideal to vibration processing. The HR quartz has gained the unparalleled sound quality and sound stage reproduction as well as super high S/N ratio.

Unlike the manufacturing process of HR quartz, HG-HR quartz is further attaining raise in purity, and rigid molecule structure has been realized. Its formation is done by machining to produce an ultimate audio-grade quartz.

Since the HR quartz responds much quicker than the conventional model, the previous poor low frequency response as well as the hardness in

sound has been extremely improved. As a matter of fact, the extensive improvements in sound quality, S/N ratio, resolution, etc. enable a convincing sound tuning.

The image figure 2-1 shows the response of the new HR quartz near the surface compared with the conventional quartz and clearly the former is much faster than the latter.

Moreover, since the response from inside over to surface gets quick uniformly as shown in the image figure 2-2, especially the high frequency characteristic becomes good, and the harmonic formation level was markedly improved.

A wide range of technical innovations become possible by applying this technology to the vibration processing of an insulator.

Image figure 2-1

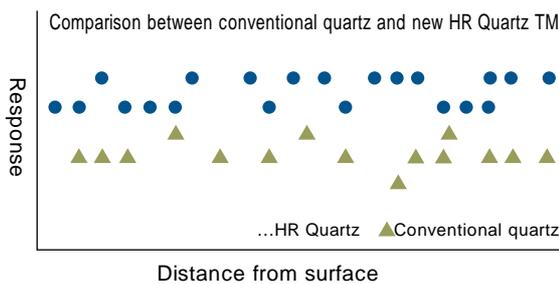
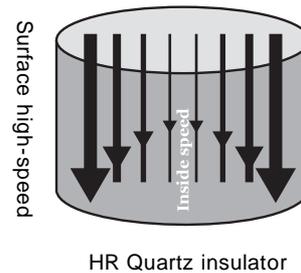


Image figure 2-2



Since outer skin propagation speed becomes very high-speed compared with internal propagation speed, the balance of all zones is extremely improved. This resulted in the high-speed response.

Specific gravity:
HR quartz/2.2 g/cm³, other company's crystal/2.5-3.0g/cm³(crystal glass etc.)
Hardness:
HR quartz / 7, other company's crystal / 5 (crystal glass etc.), diamonds / 10
Be careful of an imitation.

Airplane-grade aluminum alloy technology

Our new technology boasts a very extravagant structure machined from the special aluminum alloy of an expensive airplane-grade, and that in such an affordable price. We developed a precise and high-quality all-Japanese machining technology based on computer. Labor-intensive hand polishing carefully finishes product surface and the smooth texture with pleasant feeling also brings a big effect to sound quality.

The special aluminum alloy with its excellent, ideal characteristics for audio was chosen in order to shut out the detrimental noise caused by electromagnetic waves or high frequencies to a minimum. It is not an exaggeration to say that selecting right material determines if the sound is good or bad. We have listened to a number of proto-



type products and checked their specifications to acquire an ideal material and structure. Of course, besides the selected material and structure, we also employed the typical processing of our ultra SZ physical processing, the cryogenic temperature processing, etc.