

## Oyaide's revolutionary new conductor 102 SSC is just made through never-before employed technology and craftsmanship

**Our aim is to produce copper of the highest quality ever made using the most advanced technologies available that would be available without interruption.**

### 102 SSC

Under severe product controls, conductivity is increased to an incredible level of 102.3% IACS (after annealing). This is the basis for naming our new conductor '102 SSC'.

The copper base material for 102 SSC is refined in Japan and conforms to the elite Japanese JIS C1011 industrial standard. Only pure virgin copper base material.

#### Wire Drawing Process



Normal Drawing Wire

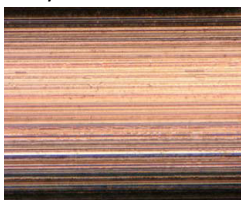


Surface-treated Copper  
by Mechanical Peeling

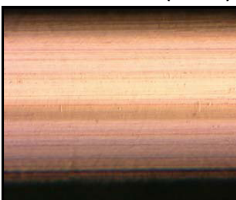
- In typical copper wire drawing processes, impurities are removed by acid cleaning (pickling). For our 102 SSC copper, we have instead employed mechanical peeling – a very precisely controlled process that removes 100% of impurities.
- Before and after the drawing process, the wire is annealed twice to remove all induced stresses and strains. We adopted 'in-line' electric annealing in order to avoid the residue of soot left behind by the more commonly used bell type annealing process.

#### Surface of Wire

Synthetic Diamond Dies



Natural Diamond Dies(102 SSC)



X2000 (KEYENCE VHX-5000)

#### Fine Drawing Process with Natural Diamond Dies

- We chose natural diamond dies over synthetic diamond dies because they yield more uniform volume reduction with reduced stress and improved lubricity
- The surface structure of our copper wire is far superior to all others, with an outer diameter accuracy of  $\pm 1\mu\text{m}$ , far exceeding the  $\pm 8\mu\text{m}$  Japanese standard for conventional copper wires. We decided to call our made using this process Special Surface Copper. Thus our new proprietary copper, with the world's finest surface quality, is called 102 SSC.

#### 3E Conductor Structure

- For the first time in history, 3E [3 Element] stranding, developed and patented by Sanshu Electric Wire, has been adopted for an audio cable. We engaged Sanshu Electric's artisan craftsmen to further reflect on established methods, and together we developed a new, higher-spec technology.
- 3E stranding combines strands of three different diameters to increase the density of the wire by decreasing the spaces between strands. This results in a smaller outer diameter than the same gauge wire made with identical individual strands, plus a more accurate, stable and perfectly circular cross section.

