

Sound Bonding Application



Sound Power Clip-Ingot-Bonding <Bonding of bus bars with MST/Multi-StepTool>

[Sound Power CIB]

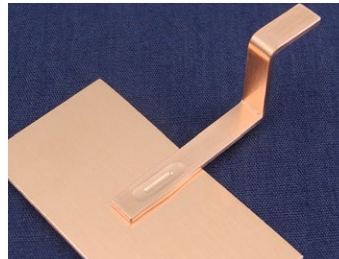
Unlike the bonding with mesh-patterned tool so far, this is a <beautiful> bonding method that parts are bonded with a soft touch and bonding marks like stapled traces don't remain.

At the interface, ingot and alloy layers are formed by energy concentration and <bonding strength can be ensured> more than ever before. Moreover damages to parts and <generation of metal powder are prevented> during bonding. (Patents pending)

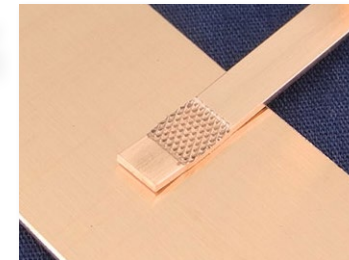
[MST which has been improved is...]

Energy is concentrated on a tip of the tool because the shape of the tool for CIB is roundish.

Comparing to CIB, the tool for MST is formed into multi-steps and energy is concentrated more and parts can be bonded smoothly. According to this, <damages to foil can be prevented, noise can be less and bonding strength is increased more.> (Patents pending)



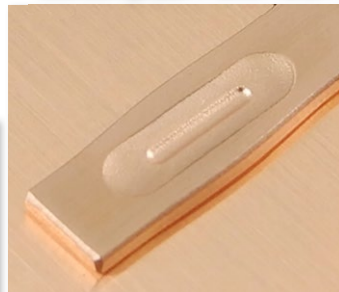
[Bonding of Cu bus bar and Cu plate with MST]



[Bonding of Cu bus bar and Cu plate with mesh-patterned tool]



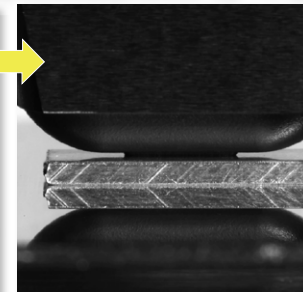
[Enlarged view of bonding part with MST]



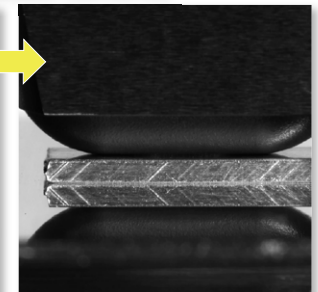
[Bonding process/photos by Hi-speed camera]



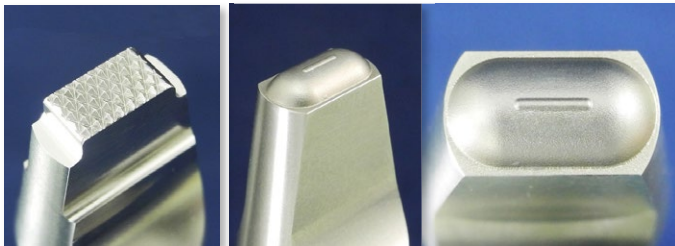
[Start pressing with MST]



[Start bonding at first step]



[Start bonding at second step]



Mesh-patterned Tool

Multi-Step Tool

ULTEX
 SoundPower Laboratory