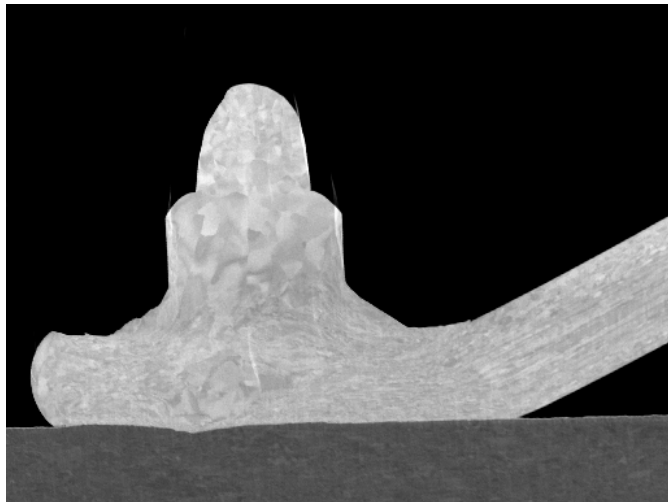


SEM MAG: 437 x DET: SE
HV: 5.0 kV DATE: 03/12/08 200 um Vega ©Tescan
WD: 8.2448 mm Device: RES120 BAL-TEC



SEM MAG: 1.03 kx DET: SE
HV: 5.0 kV DATE: 03/12/08 50 um Vega ©Tescan
WD: 8.2448 mm Device: RES120 BAL-TEC



Ion polished gold wire bonding with gold wire

LSN - Application Note

Leica EM RES101

Ion polished Cross Section of Gold Wire Bonding

Quality enhancement after mechanical polishing

Market: Microelectronics QA/Research

Companies (e.g.): AMD, ZMD, Infineon, Qimonda, STM, Intel, Tek, Bosch, Sony, Nokia, Sharp etc.

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Leica EM RES 101 Application No. 1/11

Ion polished Cross Section of Gold Wire Bonding Quality enhancement after mechanical polishing

Goal:

- Quality enhancement of the mechanical polished surface of the gold wire bond using ion polishing

Process description (benchmark values for this particular sample):

Mechanical pre-preparation: Done by the customer conventionally or with EM TXP

Parameter / Step	Cleaning	Polishing
Acceleration voltage	4 kV	6 kV
Gun current	2 mA	2.2 mA
Sample movement	Oscillation $\pm 30^\circ$	Oscillation $\pm 30^\circ$
Milling angle	10°	6°
Milling time	10 min	30 min
Sample holder	SEM standard holder	SEM standard holder

Complete process time: 40 min

Results:

- Perfect sample surface after ion polishing
- Grain structure of wire and bonding is clearly visible

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