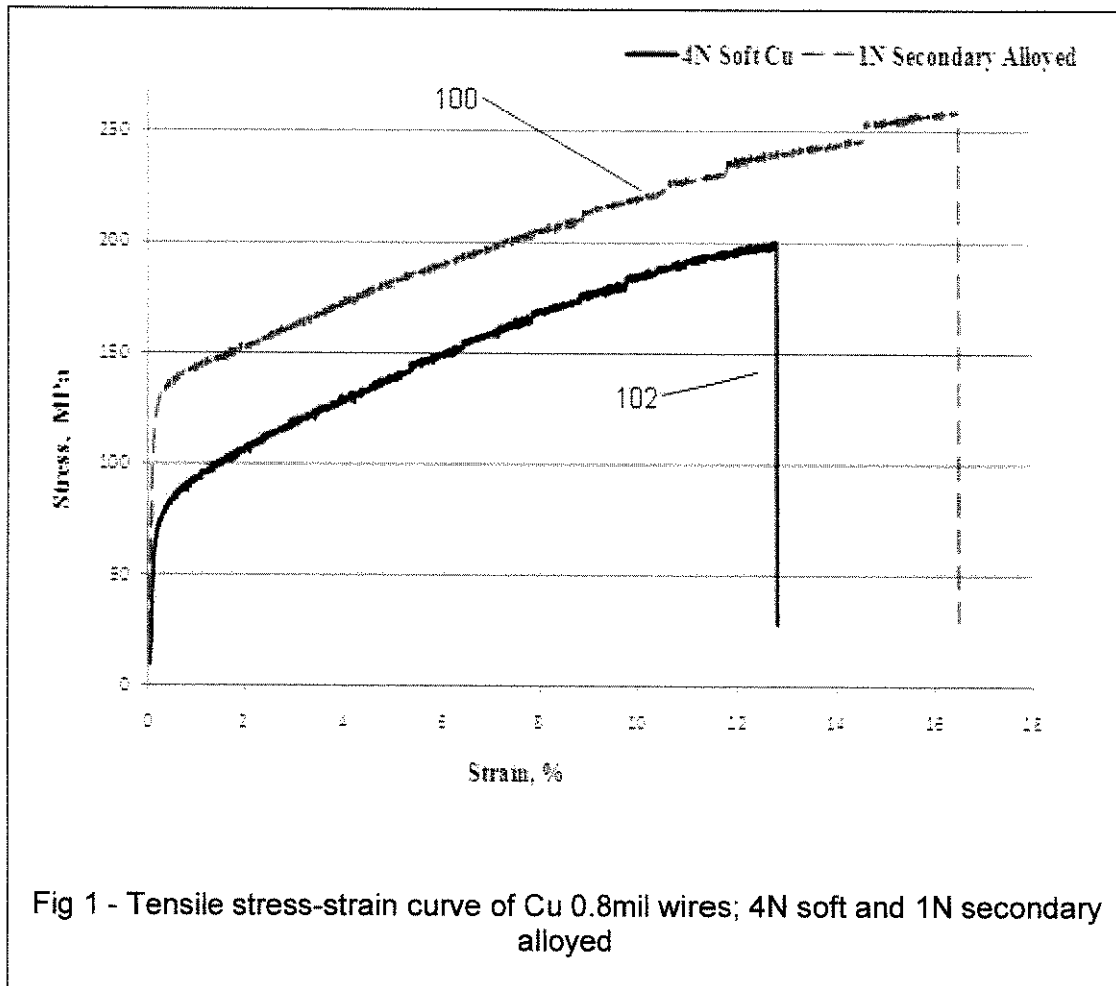
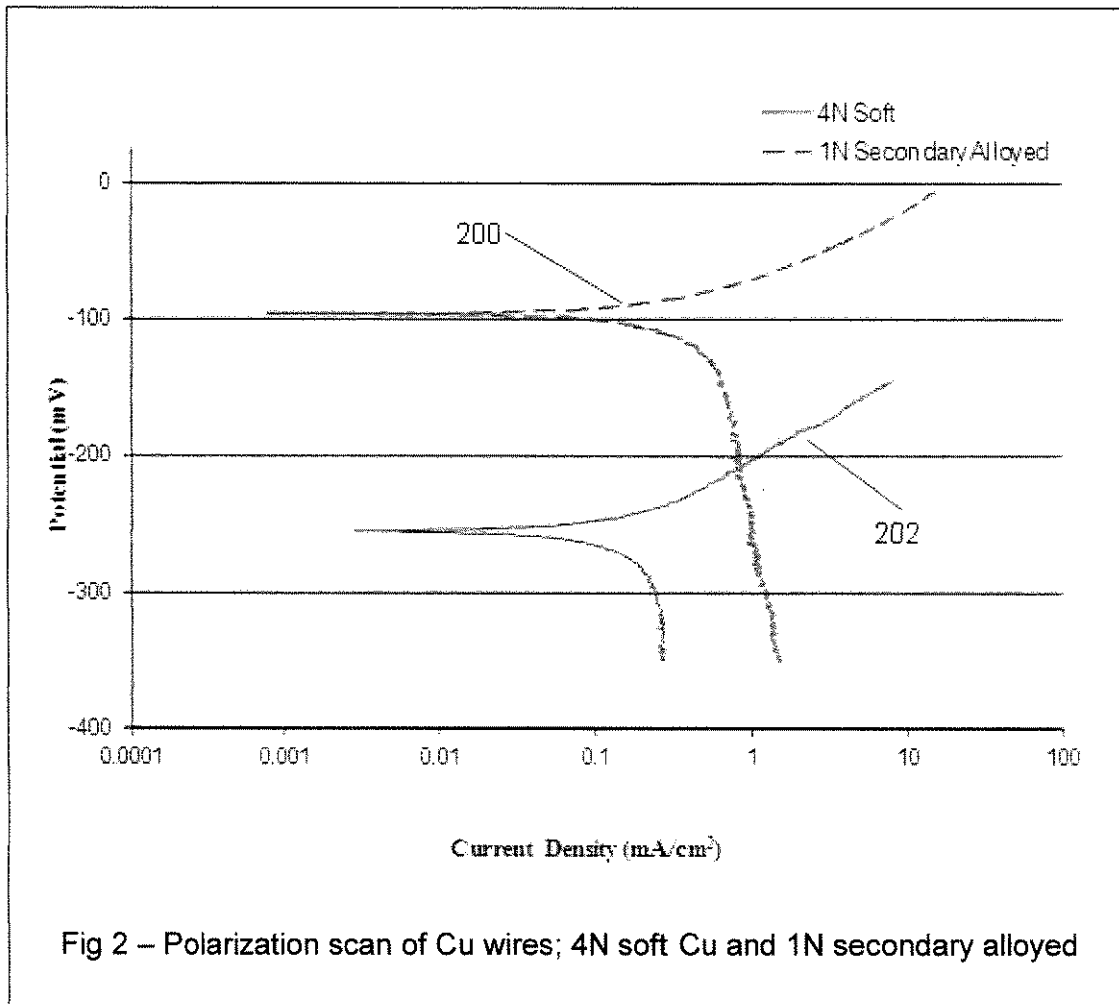






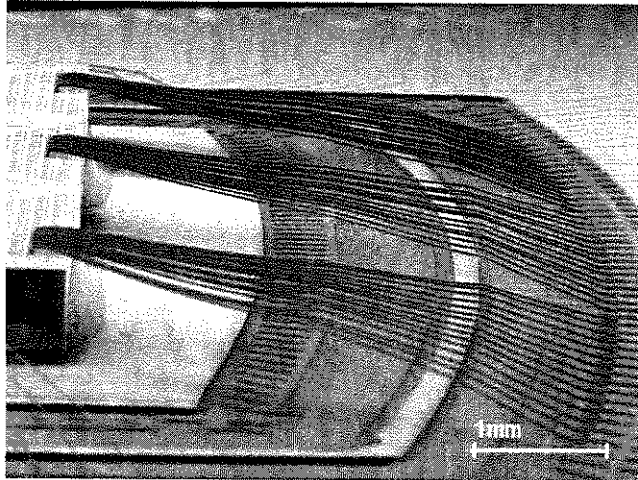


Fig 3(a) – Loop bonds of 1N secondary alloyed Cu 0.8mil wire

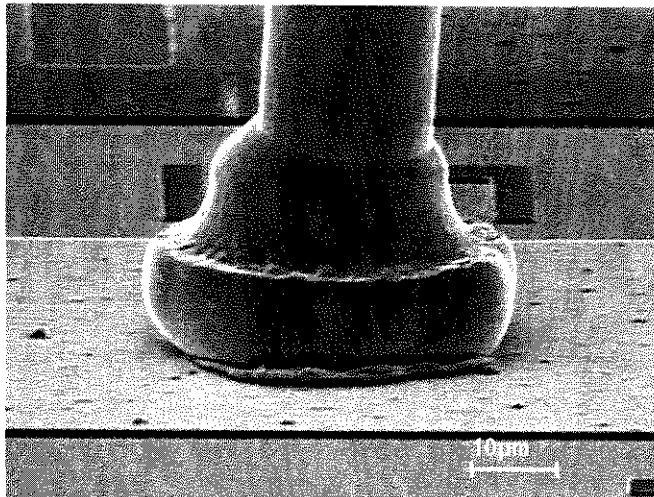
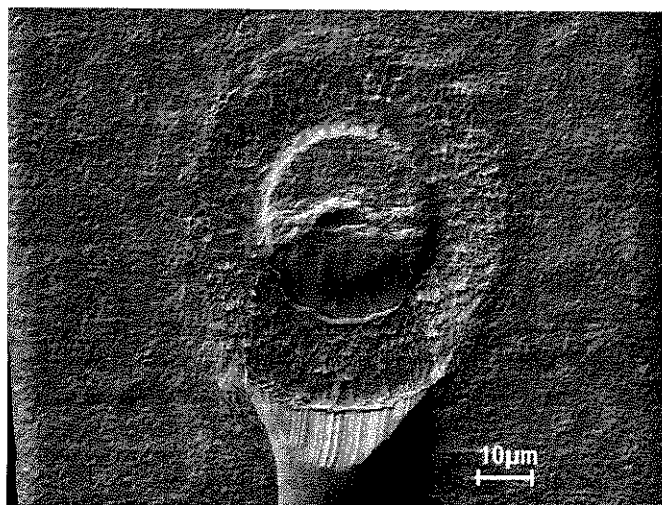


Fig 3(b) – Ball bond of 1N secondary alloyed Cu 0.8mil wire



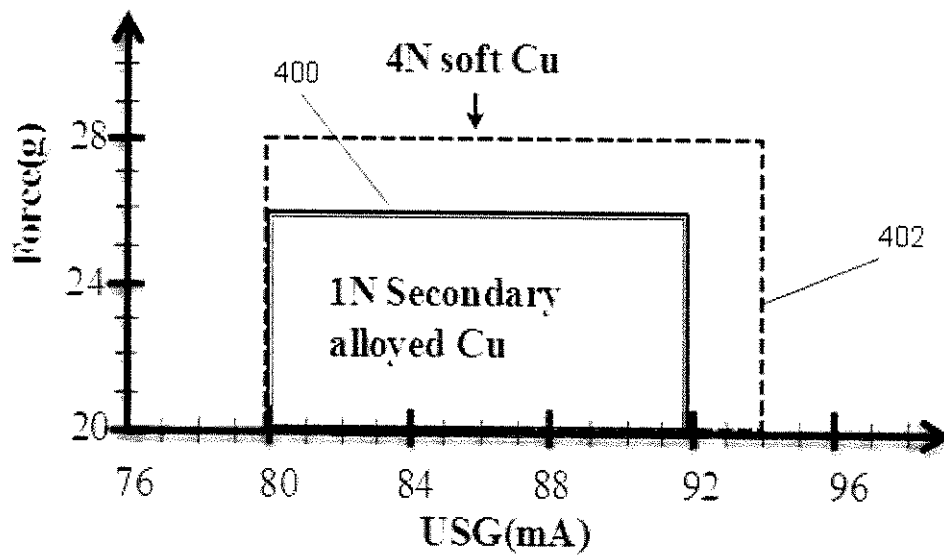


Fig 4(a) - Ball Bond Process Window

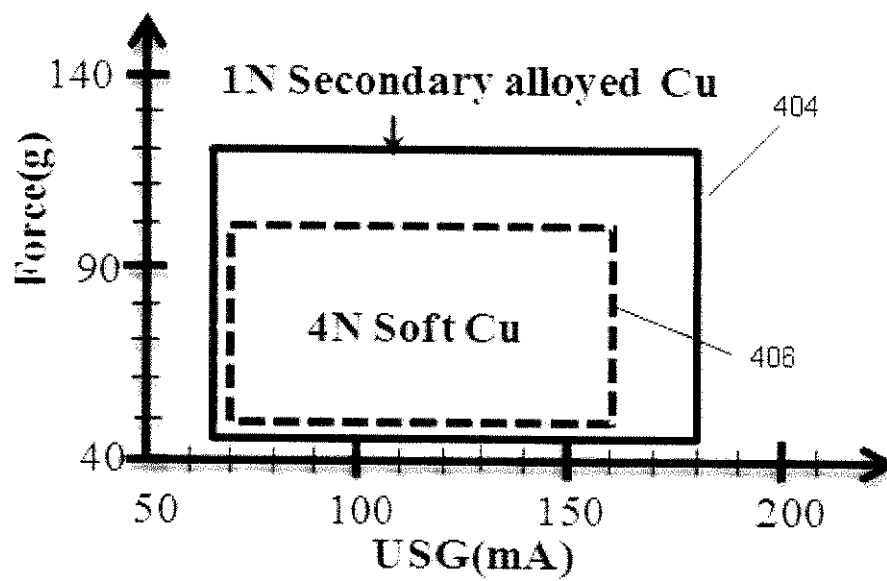


Fig 4(b) - Stitch Bond Process Window

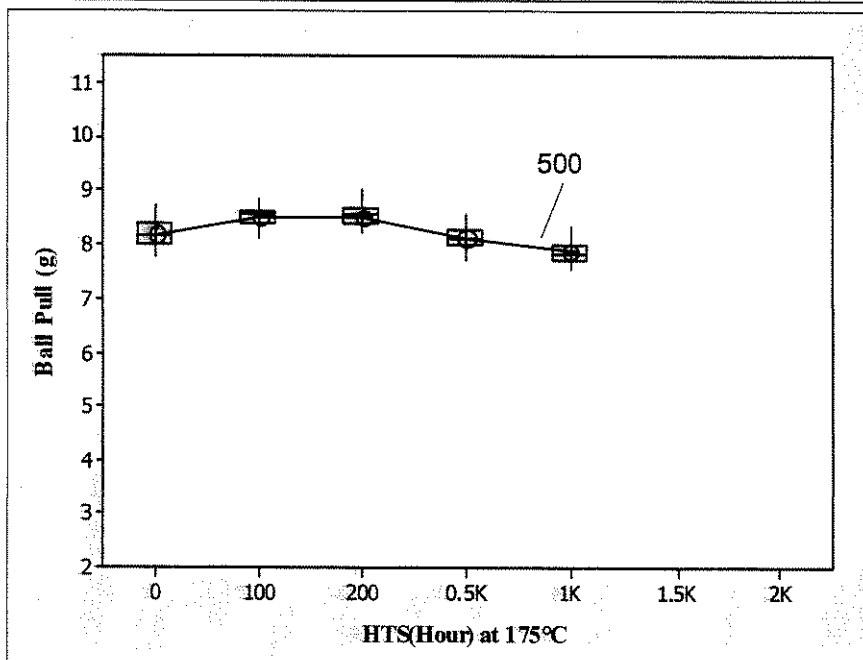


Fig 5(a) - Thermal aged 4N soft Cu 0.8mil wire

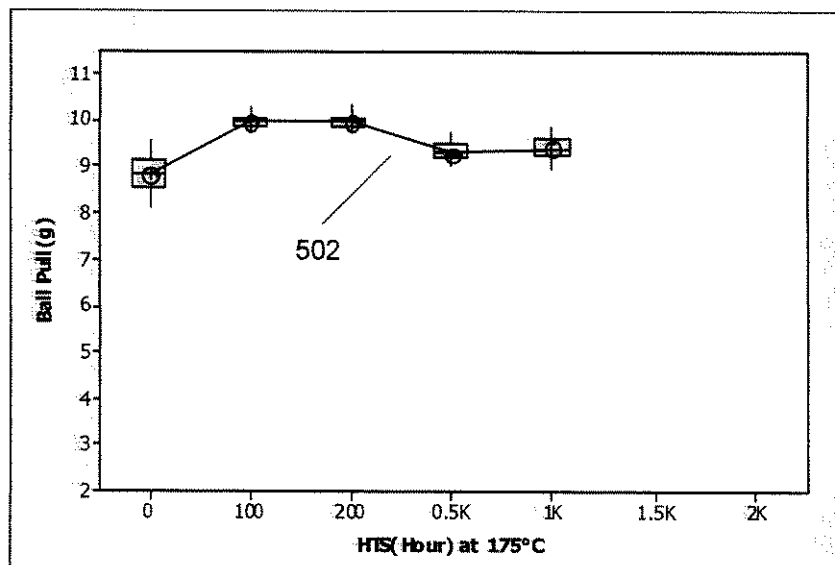
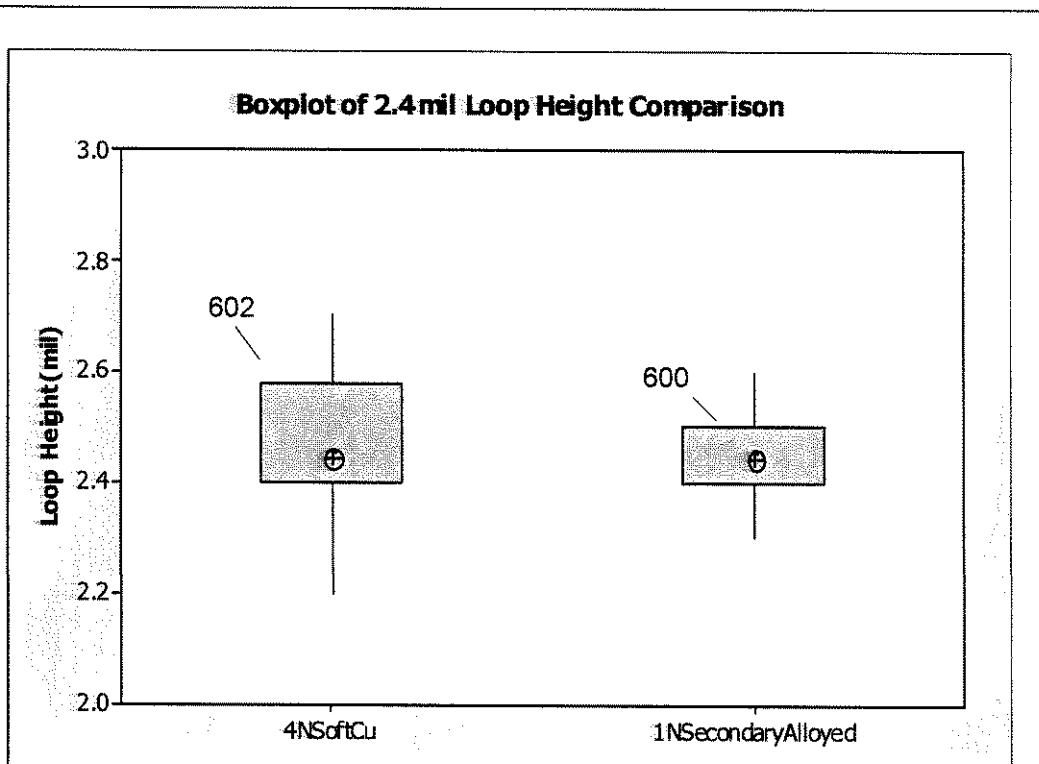
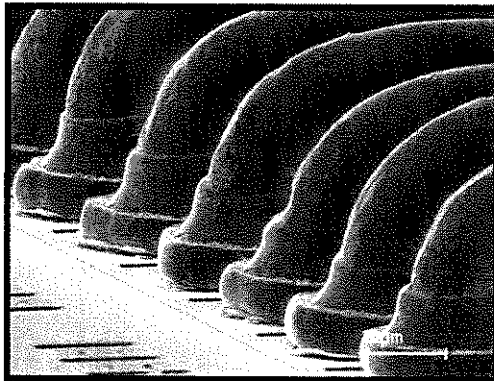


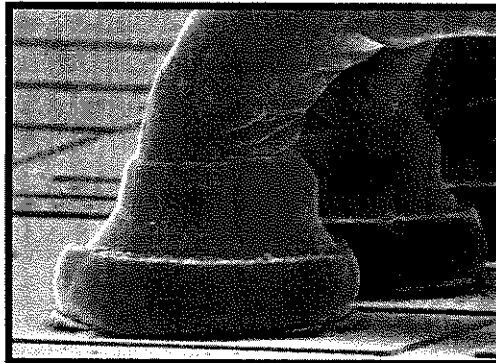
Fig 5(b) - Thermal aged 1N secondary alloyed Cu 0.8mil wire



(a)



(b)



(c)

Fig 6 - Ultra low loop comparison of Cu 0.8mil wires; 4N soft and 1N secondary alloyed