

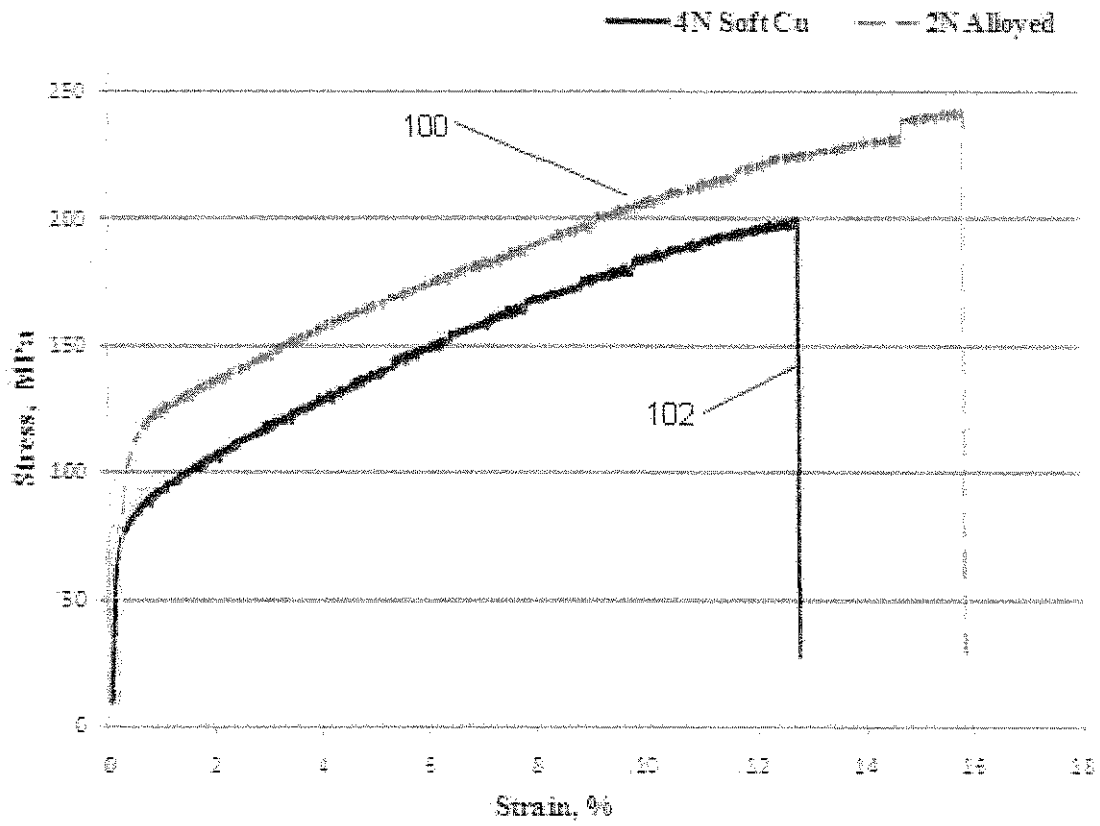
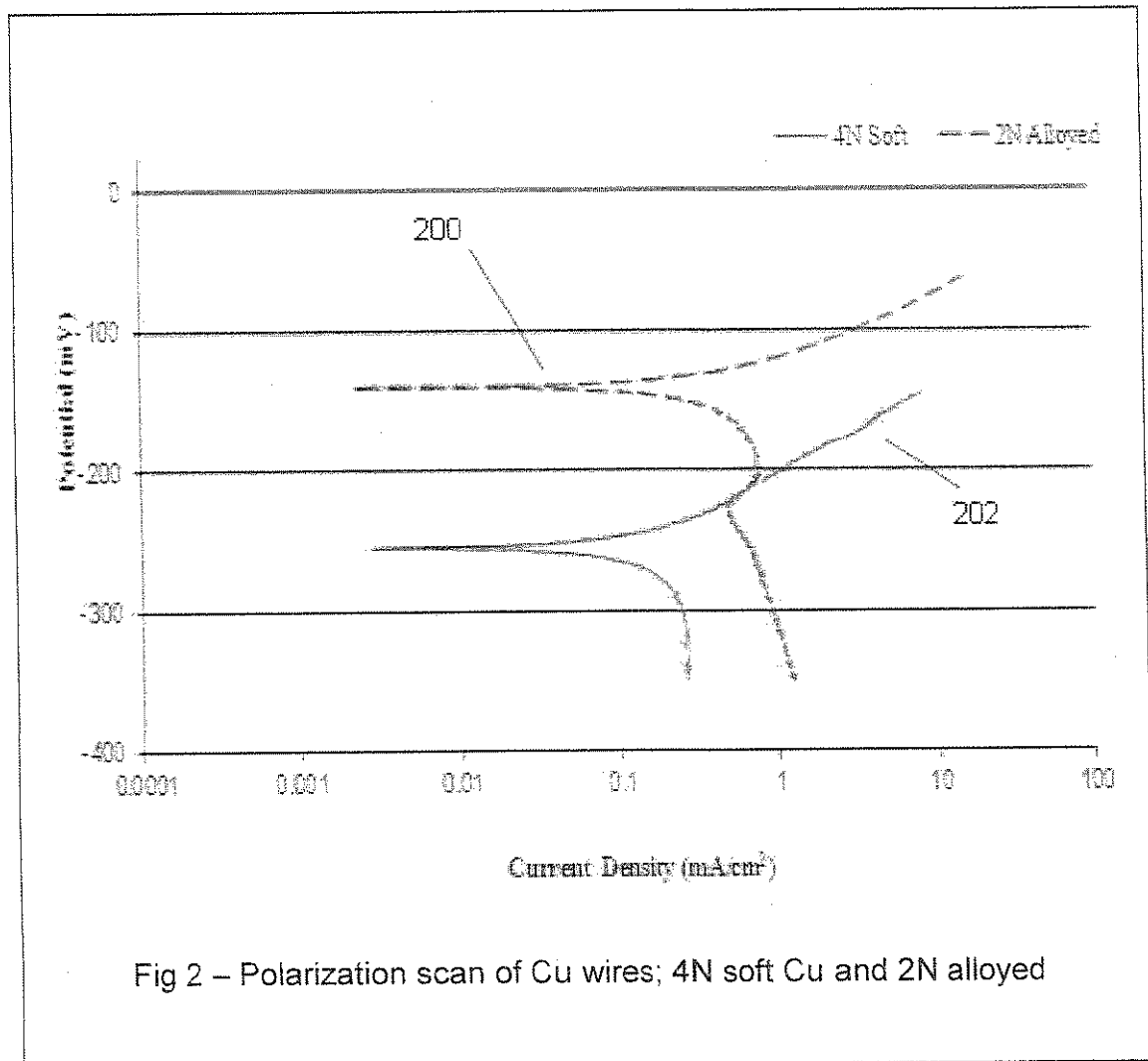


Fig 1 - Tensile stress-strain curve of Cu 0.8mil wires; 4N soft Cu and 2N alloyed



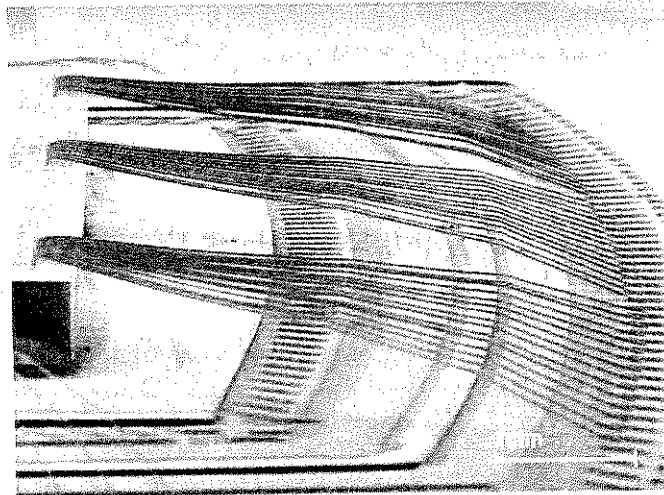


Fig 3(a) – Loop bonds of alloyed 2N Cu 0.8mil wire

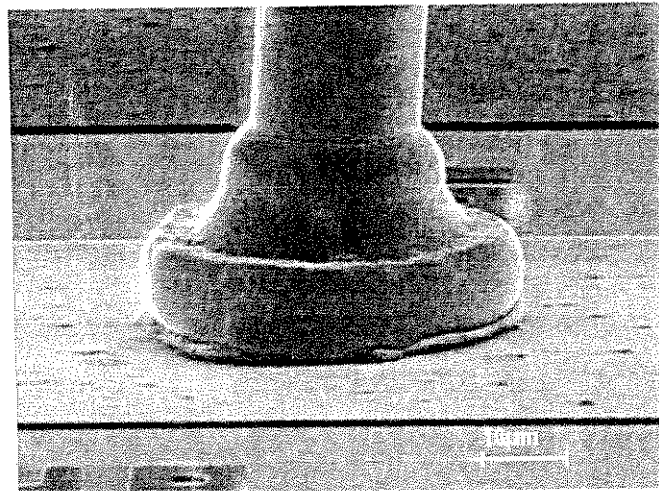


Fig 3(b) – Ball bond of alloyed 2N Cu 0.8mil wire

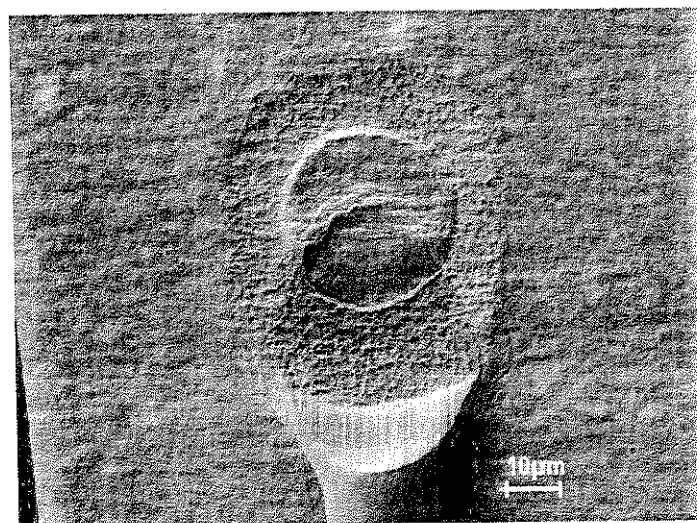


Fig 3(c) – Stitch bond of alloyed 2N Cu 0.8mil wire

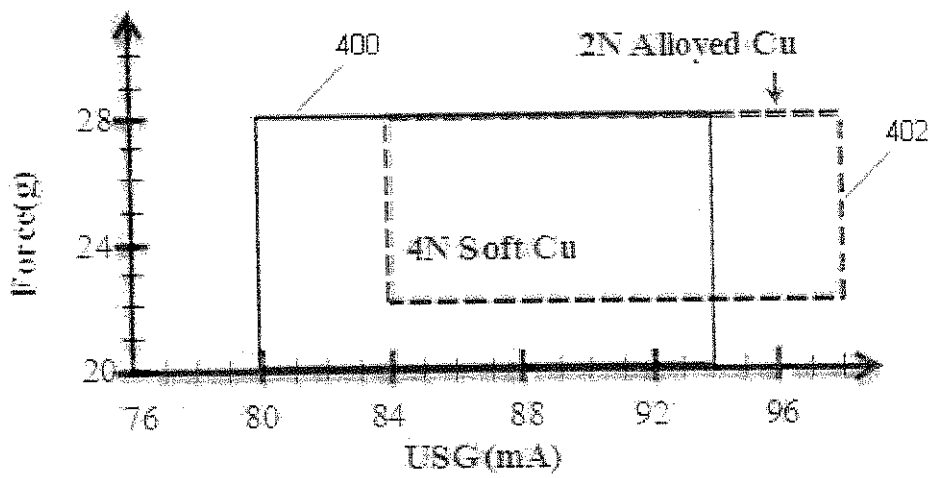


Fig 4(a) - Ball Bond Process Window

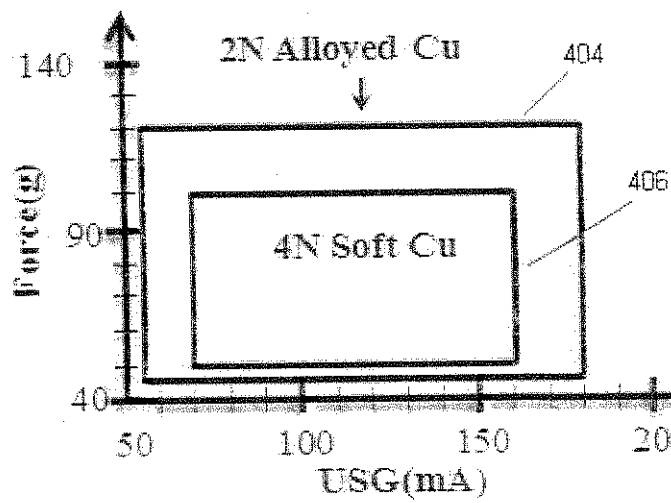


Fig 4(b) - Stitch Bond Process Window

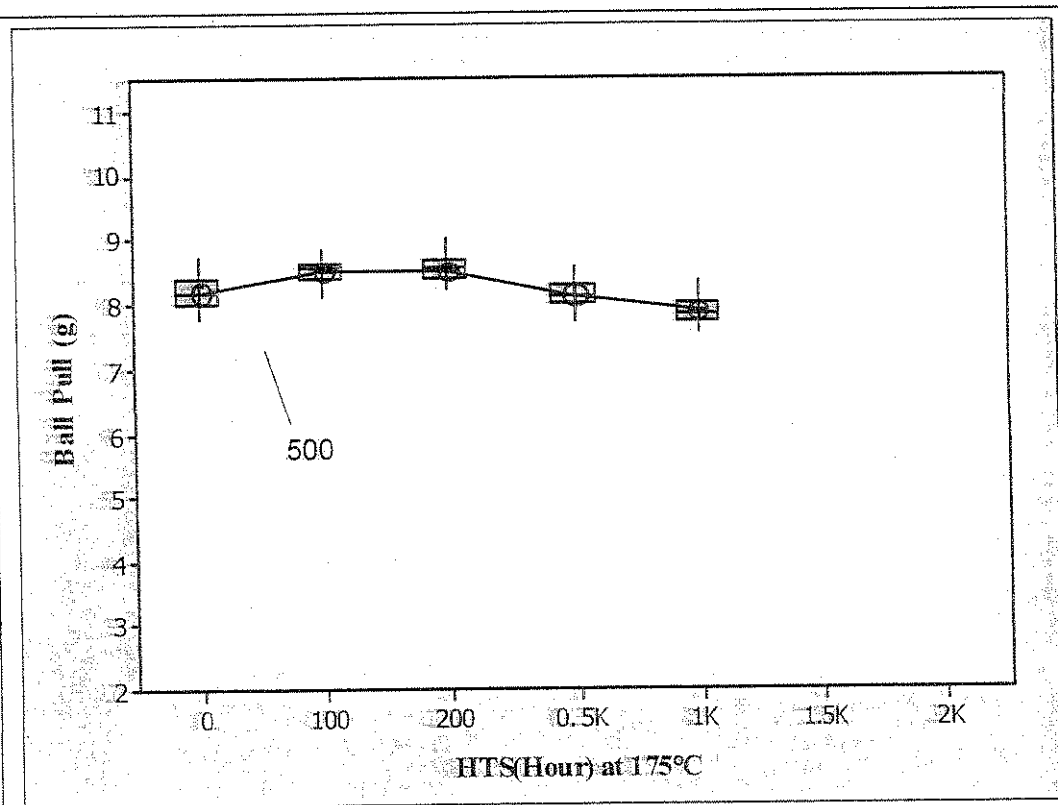


Fig 5(a) - Thermal aged 4N soft Cu 0.8mil wires

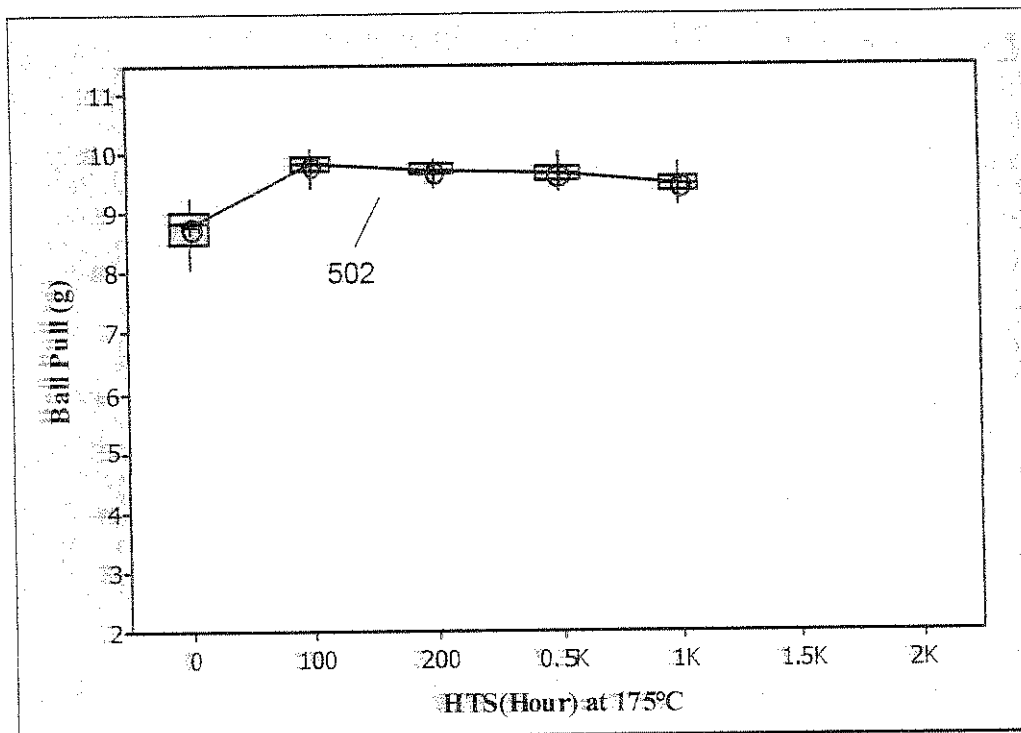
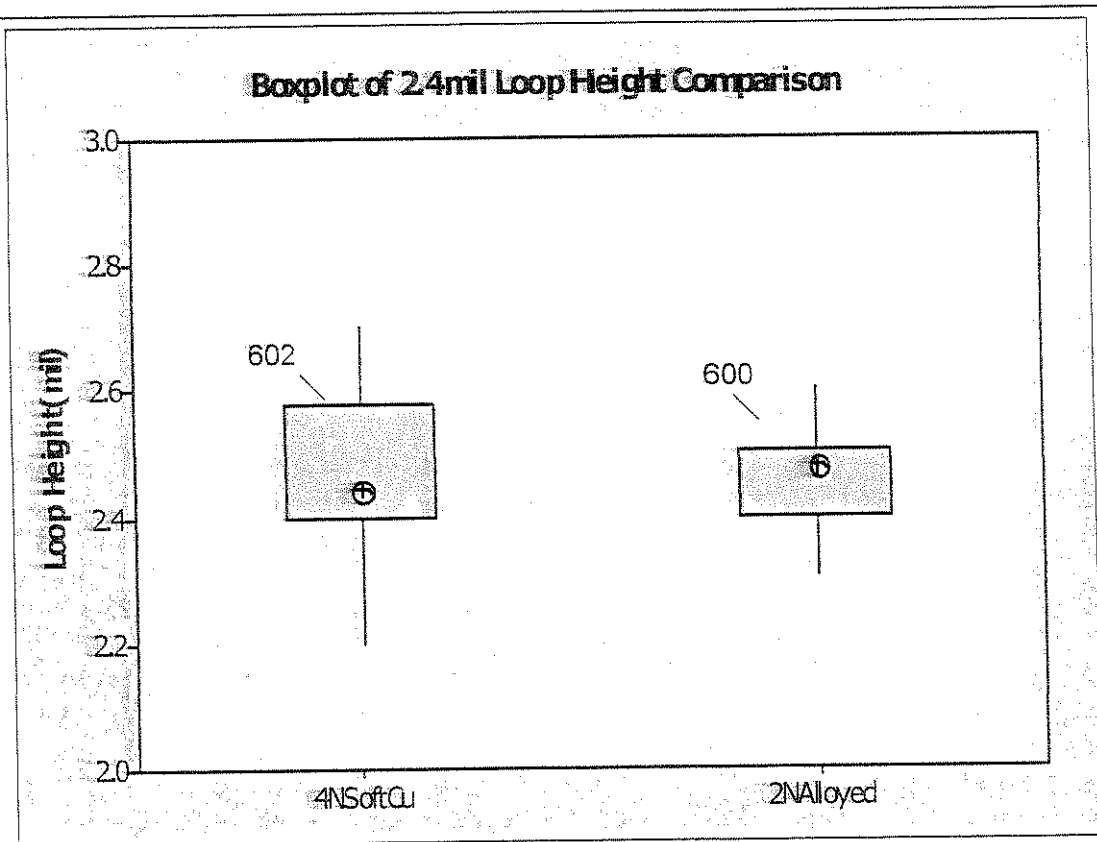
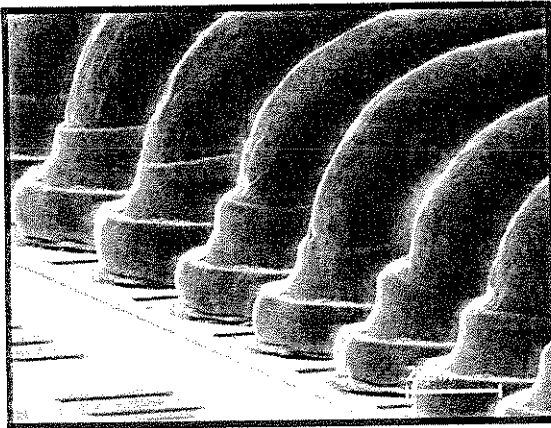


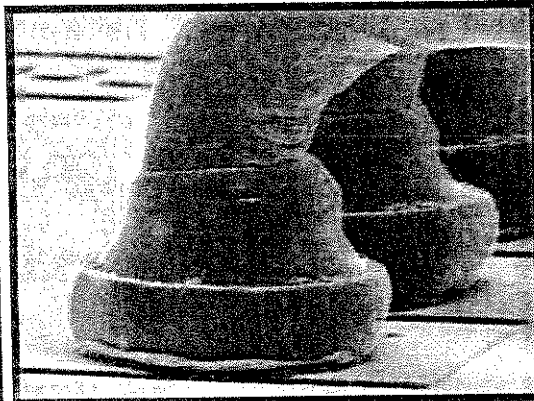
Fig 5(b) - Thermal aged 2N alloyed Cu 0.8mil wires



(a)



(b)



(c)

Fig 6 - Ultra low loop comparison of Cu 0.8mil wires; 4N soft and 2N alloyed