3.2 Push-in Loading Test

Channel 1 (ch1) and 2 (ch2) were the most received stresses (1.25 N/mm²) and highest deflection. The stresses were transmitted to the adjacent blocks caused by vertical friction and developed interlocking behavior. Figure 5 presented the maximum deflection of USCB Shell-R15 at the loading of 25 kN. The deflection for USCB Shell-R15 of 50 mm and 70 mm loose bedding sand thickness was 5 mm (about 6%) better than control block. While, USCB Shell-R15 of 90 mm loose bedding sand deflected 6.5 mm and 23% more than control block. The experimental results indicate, the loose bedding sand thickness of 50 mm and 70 mm received stresses with lower deflection compared others. USCB with shell groove of 15 mm performed effectively on this bedding sand thickness. It was acceptance sufficient for loose bedding sand thickness inlay the USCB Shell-R15.